

A T H E S I S

F O R

THE D E G R E E O F D O C T O R O F M E D I C I N E

O F

THE U N I V E R S I T Y O F E D I N B U R G H

B Y

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O N
THE COMMAND, THE TRAINING, AND
THE WORK OF A FIELD AMBULANCE IN FRANCE
DURING THE GREAT WAR.

BEING
THE RECORD OF
THE 2nd/1st SOUTH MIDLAND FIELD AMBULANCE
61st (SOUTH MIDLAND) DIVISION
B. E. F.



I N T R O D U C T I O N.

I completed the examinations necessary for the degrees of M.B., Ch.B. (Edin.) in July 1899, and being still under age, received Graduation in October of that year. After holding the positions of Resident Surgeon (Gynaecological Wards), and Resident Physician in the Royal Infirmary Edinburgh; Resident Medical Officer at the Convalescent Hospital Corstorphine, Resident Assistant at the Crichton Royal Institution, Dumfries, and Resident Surgeon at the Royal Maternity and Simpson Memorial Hospital, Edinburgh; I became Assistant in a large private practice in Malvern, Worcestershire, where my principal work was the Medical charge of all the children in six boarding-schools of various sizes and types, together with that of the 500 boys attending Malvern College, one of the larger of the English Public Schools.

This work, especially from the point of view of complete Medical control of the Sanitation and health of the School, and ultimately a close personal supervision of the School Athletics became my chief

interest, and occupied the larger proportion of my energies until the outbreak of War.

It had been my intention to offer as my THESIS a record of this work during a period of twelve years, especially in relation to the pubertal cardiac development of these boys, and in August 1914 my data were almost complete, but an absence of nearly six years with the consequent loss of the post, and of many of my records have rendered this impossible, and therefore I now present this record of my War Service in its place.

For some years before 1914 I had taken an active interest in Auxiliary Military affairs, both Volunteer and Territorial, and was consequently mobilised on August 5th of that year with the Territorial Force in my then rank of Surgeon-Captain in the 2nd South Midland Brigade, R.F.A. In this Unit, however after a week's strenuous work, the return of the Surgeon-Major rendered me supernumerary, and I was therefore ordered to assist my former Commanding Officer in raising the Second Line of the Brigade. This feat we accomplished, to the astonishment of Authority in thirteen days, by the simple expedient of attesting and Medically examining all the volunteers from the

audiences at our recruiting meetings before their easily aroused enthusiasm had been allowed time to cool.

In this new formation I worked for some months, adding at the Colonel's request many other Military and Administrative duties to those of my immediate profession, and it was while here that I was offered and accepted the Command of the 2/1st South Midland Field Ambulance, an unruly and partly mutinous Unit which had been sadly neglected and was still as untrained as it was undisciplined.

My THESIS consists of an account of our work together, and for the convenience of the reader it is divided under the following heads which narrate our experiences, illustrate our work, and seek to show, that where our methods transgressed the narrow confines of Official Medical sanction and approval, the violation was both conscious and deliberate, and that it was in the end justified by its results.

S Y N O P S I S .

I. COMMAND AND TRAINING:

An account of our methods of Discipline and training, and of our preparations for Active Service.

II. OUR WANDERINGS IN FRANCE:

A short narrative and table of our Itinerary in France, enumerating our various duties.

III. DRESSING STATIONS IN THE FIELD:

A classification of the different types we built and used, with examples.

IV. MEDICAL WORK IN THE FIELD:

A short general survey with selected details and examples.

V. REST STATIONS BEHIND THE LINE:

Details of Convalescent Camps we built, with observations on our methods of Administration

VI. FIELD SANITATION:

Practical details of our own special methods of Construction and Supervision.

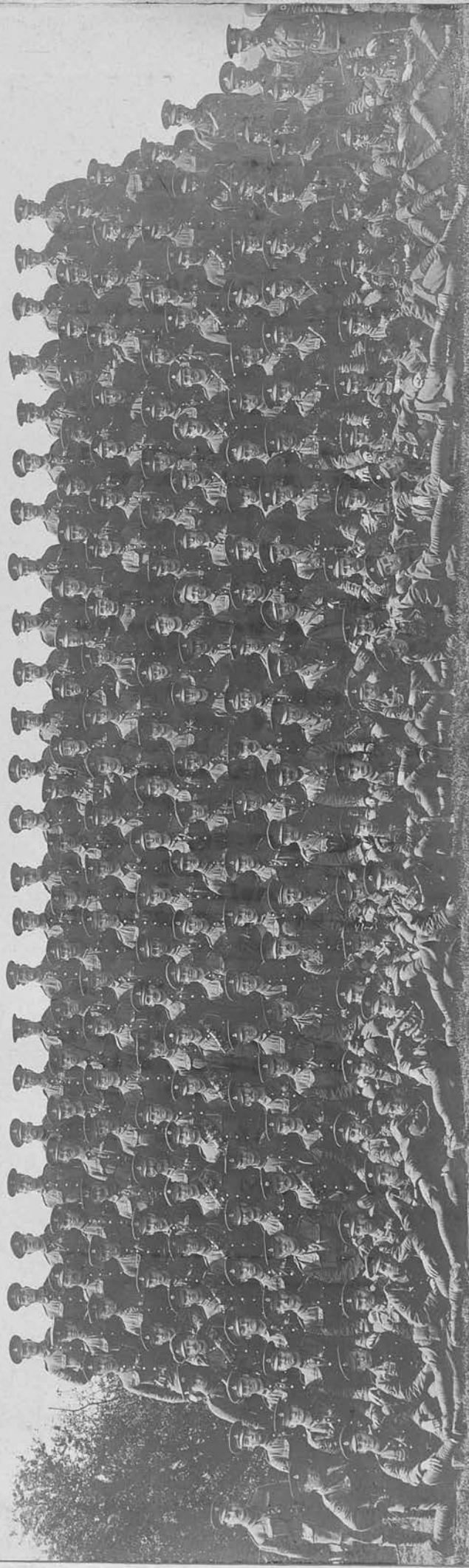
VII. SUMMARY AND CONCLUSION:

Criticisms, Failures, and Suggestions.

LIST OF PLATES.

- I. The 2nd / 1st South Midland Field Ambulance.
- II. The Officers and Non-Commissioned Officers.
- III. Scheme of a Field Ambulance.
- IV. Specimen Instructional Diagram: Digestion.
- V. Ditto. The Circulation.
- VI. Specimen Training Skeleton Map.
- VII. Similar Training Map completed by one of the Men.
- VIII. The Trench Shelf in use.
- IX. One use of a Horse Ambulance Waggon:
"Off to the Divisional Races".
- X. Scale Diagrams for Waggon Packing.
- XI. Our Practice Dug-out.
- XII. Map showing Fighting Areas of the 61st Division.
- XIII. Semi-Diagrammatic Scheme of an Ambulance System.
- XIV. Map showing Ambulance Arrangements on two fronts
near ARRAS 1917.
- XV. Map showing the actual sites of our Dressing
Sta tions.
- XVI. Plan of our Advanced Dressing Station: LAVENTIE.
- XVII. Map of our Medical Posts during Retreat of the
Vth Army: March - April 1918.
- XVIII. Sketch of our Dressing Station at MARTEVILLE.
- XIX. Sketch of our Walking Wounded Dressing Station
at VLAMERTINGHE MILL: YPRES 1917.
- XX. Plan of PLATE XIX.
- XXI. Plan of our Main Dressing Sta tion: LA GORGUE.
- XXII. Sketch of our Main Dressing Station at AVELUY
on the ANCRE: Decr. 1916.

- XXIII. Plan of PLATE XXII.
- XXIV. Plan of our Dressing Station near FINS: 1917.
- XXV. Plan of our Type of Oven showing flues.
- XXVI. Plan of a Bath House.
- XXVII. Plan of a Scabies Bath and Treatment House.
- XXVIII. Sketch Plan of the XIth CORPS Rest Station
LIGNE: July 1918.
- XXIX. Plan of our Bath House at ATHIES near ARRAS.
- XXX. Plan of Bath House at XIth CORPS Rest Station:
LIGNE.
- XXXI. Diagrammatic Sketch showing construction of
the "Lander Bath".
- XXXII. Diagrammatic Sketch of our Meat Safe.
- XXXIII. Plan of fitting for utilising Petrol Tins for
sterilising Water Bottles.
- XXXIV. Diagrammatic Sketch and Side Elevation of our
Incinerator.
- XXXV. Diagram and Sketch showing construction of
our Latrine and Sanitary Square.
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111



I. COMMAND AND TRAINING.

It will be admitted that there are few things more difficult to describe than the qualities and attributes which are necessary or desirable in the aspirant to successful, even if but modest military Command. These are so largely unconscious and intuitive, depending for the most part on personality, the power of rapid and sound decision, with the ability to impel confidence and enthusiasm in others, that any attempt at detailed description might risk giving the impression that one had been betrayed into an adventure in egotism as undesirable as it is unnecessary.

But it may be pertinent here to mention how quickly and naturally men of certain types succeeded, and how often it was noticed and latterly remarked, how frequently were men successful who had been for some years engaged in the general practice of Medicine. This seemed to me to demonstrate beyond doubt how sound and adequate a form of general education was comprised in the old Medical Curriculum, especially when followed and enhanced by that intimate intercourse with life and humanity which can nowhere be better experienced than in the daily round of ordinary Medical practice. Many trained in this hard school were found possessed of a versatility and an adaptability which made them at once conspicuous among their fellows. They had

a quick eye for a situation, an alert and observant mind, a rapidity and certainty of decision, which with a willingness to assume responsibility and a wealth of resource, made them almost invariably reliable and successful leaders.

But it was without the comfort of any such knowledge or the conscious possession of any such qualities that I took over, on October 15th 1915, the Command of the 2nd/1st South Midland Field Ambulance, and found myself in charge of and responsible for an unknown body of men who though they seemed full of possibilities were still sullen, vexed, bored, disheartened and woefully dispirited in all their work. They seemed almost too listless and slack for recovery, but as some of them gave evidence of an attempt at response to a tentative lead, hope revived and my chief anxiety was lest the first step ~~might be taken~~, through lack of thought, in a wrong direction. There was however little time to spare and after interviewing all the Non-Commissioned-Officers in groups, I elected to meet the privates of the Unit by themselves, a new departure, unpopular with all except the men themselves, but one which by breaking down for ever the barrier of artificial and traditional aloofness between the Leader and the humblest of his men, and giving them at all times direct ^caccess to their Commanding Officer, was the means of saving what might have been a hopeless and impossible situation.

This with the recognition that each man was indeed an individual with a soul of his own, along with a little personal sympathy and an intelligent interest in his work and disposition, produced almost at once as remarkable a change as I have ever seen in the attitude of this body of men.

Within forty-eight hours confidence was established, a bargain of mutual work and co-operation had been struck, and the former Officers having departed, all the useless N.C.O's were scrapped, and the new system was inaugurated with as sane and balanced an address on discipline and work as could in the time be prepared. In this among other things it was emphasised that a due sense of proportion would be cultivated in everything, and that while trivial failures and short-comings might and would where possible be disregarded, there still remained for serious crimes and for offences against the new spirit of the Unit, as for the liar, the sneak and the slacker, the resources of Official correction, and that if these had to be invoked their application would most certainly be at once speedy, relentless and condign. Thrice only did luckless adventurers who had the temerity to test the sincerity of these promises, meet their due reward, in each case after acknowledging both its severity and its fairness, and thereafter we had peace; not as the price of either slackness or content, but rather

that bred of a constant vigilance which can save a man before he falls and can pull him straight before he has really gone astray.

Before long, work made interesting was both too hard and too constant for crime to have a chance, and the rise of Unit pride and of Unit tradition made every man regard any real offence, as much an insult to himself as a failure of respect towards law and order.

The Field Ambulance.

The Field Ambulance as a working Medical proposition though it had indeed existed in the Territorial Force, had had no actual corporate existence in the Regular Army before this war began. It was there on paper but had never been embodied and even the Territorial Field Ambulances had scarcely got beyond that maze of ordered Ceremonial and pictured Pageantry which in those halcyon days seemed to represent, apart from their hospitals and laboratories, the official ideals of Military Medicine.

It had been evolved from the combined experience of the South African Campaign, and was obviously a compromise between two conflicting views, being at once both a field hospital unit and a bearer company. Whether it combined the faults of both and the virtues of neither, or did indeed fulfil the highest expectations of its designers may one day be decided, but if

in the early stages of this war it was the ideal of an up-to-date field medical unit, then indeed must the date have been reckoned as 1902, for although events had marched apace in the intervening years, the formation had not been altered, and consequently it had few pretensions to modernity when Authority at length awakened to the fact, that the passage of time had already brought us to the year of grace 1914.

By the Autumn of 1915 however, after many of our anterior troops had already suffered most dire neglect and horrors unspeakable, some of its defects had been recognised and remedied, but to the end of the war, in my opinion, its potentialities were never properly exploited. Possibly this may have been the fault of the Medical Authorities, some of whom were alleged to be self-sufficient, unadaptable, and traditionally subservient to the executive. They apparently also lacked that energetic imagination and assured conviction which would have insistently demanded reforms which might indeed have been had for the asking, to the immeasurable benefit of the sick and wounded, and the inestimable comfort and efficiency of all their units in the field.

It seemed sometimes as if they were wilfully ignorant of our requirements and deaf to our oft-expressed desires, while an egregious self-esteem and a soul-destroying self-satisfaction in some, were the despair of all those whose zeal demanded constant and never ending progress and improvement.

THE FIELD AMBULANCE

DETAILED ARRANGEMENT OF PERSONNEL

EXCEPT HORSE TRANSPORT

BY SECTIONS AND SUB-DIVISIONS

	"A" SECTION	"B" SECTION	"C" SECTION	Totals
I. NURSING SUB-DIVISION				
OFFICERS	3	2	2	7
N.C.O.'s	7	6	6	19
MEN	18	16	16	50
II. BEARER SUB-DIVISION				
OFFICERS	1	1	1	3
N.C.O.'s	2	2	2	6
MEN	42	41	41	124
SECTION TOTALS	OFFICERS — 4	3	3	
	OTHER RANKS — 69	65	65	

towards that ideal of perfection which knows no limitations and admits no finality.

When I took up my new Command I had little knowledge and no experience of the Field Ambulance as a working Medical unit, but it did not take long to understand its constitution, to estimate its powers and to visualise in some measure its possibilities.

It consisted of three Sections "A", "B", and "C", and two Subdivisions. Each Section was a complete and self-contained entity, a microcosm of the whole unit; "A" Section being slightly larger than the others as it was also the Headquarters of the Ambulance, and was presided over by the Commanding Officer. Each Section having its own Officers, N.C.O.'s and Men suitably disposed, and its own two Sub-divisions, the stretcher-bearers and the nursing personnel, was capable of independent action, and similarly the Bearer Sub-division and the Nursing Sub-division, discarding for the moment their Sectional allegiance, could coalesce and when necessary act as one.

These features of the Field Ambulance and its consequent elasticity, formed in my opinion its greatest value, and though the extent to which they might be utilised depended almost entirely on the character of the Commanding Officer, they gave it a scope and resource which should have made it easily the most priceless asset which the Medical Staff in France had at its disposal.

It was of course common knowledge that in war the Field Ambulance acted primarily as the first refuge of the wounded soldier, and indeed as the forward Medical Headquarters of all the fighting troops . It was to it that the fighting men must look in all their emergencies for anything beyond mere first-aid help, and although the most urgent of these would undoubtedly be surgical, still troops could not be always fighting and in the intervals of rest, medical work would be just as necessary and might indeed, in the light of the experience of other wars, prove of even greater ultimate importance.

It was seen therefore that the training of the men, if they were eventually to be of the greatest possible service to their comrades in the field, must be not only sound and thorough, but in addition as wide and varied and as nearly universal as the most catholic imagination could conceive. Hitherto in my own Command, training seemed to have been so desultory, so perfunctory and so inconsequent that it had taught the men little, and its only ascertainable result had been to increase their utter boredom which slackness and a lack of discipline had so easily engendered. This was altered at once and systematic instruction beginning with the most elementary basic principles was taken in hand, but not begun until a complete scheme of training had been devised which showed at a glance both the goal of ultimate and

ANATOMY.

1. MOUTH.

Teeth; Tongue.
Salivary Glands
Parotid
Sub-Maxillary &c.

2. PHARYNX.

Soft Palate
Fauces; Uvula.
Epiglottis.
Glottis.

3. OESOPHAGUS.

4. STOMACH.

Cardiac End
Greater Curvature
Lesser Curvature
Pyloric End
Pyloric Opening
Pyloric Valve
Mucous Membrane
Gastric Glands.

5. DUODENUM.

Three Parts.
First & Third - Nil.
Second has opening of
Bile & Pancreatic
ducts.

6. LIVER.

Gall Bladder
Bile Ducts.

7. PANCREAS.

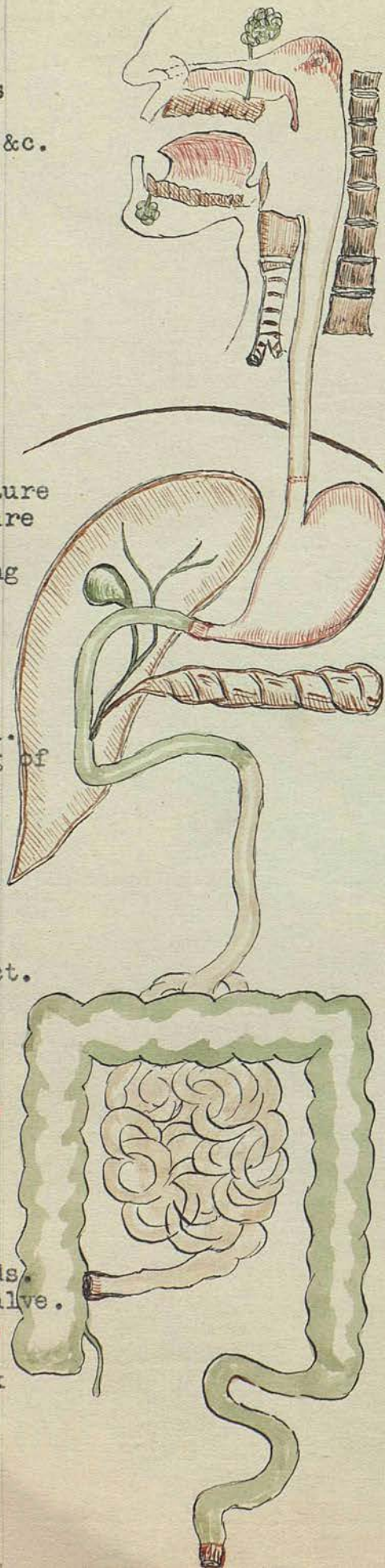
Pancreatic Duct.

8. SMALL INTESTINE.

Jejunum -
8 ft. long
Ileum -
12 ft. long
Mucous Membrane
Intestinal Glands.
Ileo-Caecal Valve.

9. LARGE INTESTINE.

Caecum.
Vermiform Appendix
Ascending Colon
Transverse Colon
Descending Colon
Sigmoid Flexure
Rectum; Anus.



PHYSIOLOGY.

1. MOUTH.

Teeth - Chewing or
Mastication
Saliva - Turns
Starch into Sugar

2. PHARYNX.

Swallowing or
Deglutition

3. OESOPHAGUS.

Passes down in front
of Vertebral Column the
Diaphragm.

4. STOMACH.

Contents Acid.
Gastric Juice; contains
Hydrochloric Acid and
Pepsine, turns Proteids
into Peptone which is
Soluble.
Absorbs also Water, Salt
and some Sugar.

5. DUODENUM.

Receives Bile from
Liver, & Pancreatic
Juice from Pancreas.

6. LIVER.

Bile neutralises
Acid of Stomach and
Emulsifies Fats.

7. PANCREAS.

Pancreatic Juice
helps in turning
Starch to Sugar.
Proteid to Peptone
Fats to Emulsion.

8. SMALL INTESTINE.

Intestinal Juice
helps Bile & Pancreatic
Juice to complete, Starch
Proteid & Fat Digestion.
Absorption of Water, Salt
Sugar & Peptone by Blood
Emulsion by Lacteals.

9. LARGE INTESTINE.

End of Digestion
& Absorption; Separation
of Waste & Lubrication
by Mucus from Glands.

ANATOMY

1. PULMONARY CIRCULATION.

Lungs

Right & Left
Trachea: Bronchus
Pulmonary Artery
Capillaries
Pulmonary Veins
Alveolus

2. HEART.

Pericardium
Myocardium
Endocardium

4 Chambers

2 Ventricles, R & L
2 Auricles, R & L.

Right Side- Venous
Thinner, Weaker.
Left Side- Arterial
Thicker, Stronger.

4 Valves

2 Auriculo-
Ventricular

Right: Tricuspid,
Left: Bicuspid,
(Mitral)

2 in Vessels

Right: Pulmonary
Artery
Left: Aorta.

3. SYSTEMIC CIRCULATION.

Left Ventricle
Aorta & Branches
Aortic Valve
Arteries: Arterioles;
Capillaries: Venules;
Veins & Branches;
Vena Cava
Right Auricle.

4. PORTAL CIRCULATION.

(enclosed in lines)

Veins from Digestive
System unite to form
Portal Vein which goes
to Liver & divides
like an Artery.

Other veins again
unite & join Vena Cava
& go on to R. Auricle.

PHYSIOLOGY

1. PULMONARY CIRCULATION.

Impure Venous Blood
goes by Pulmonary Artery
to Capillaries round Air-
Cells; gives off Water &
 CO_2 ; takes up Oxygen &
returns purified by Pul-
monary Veins to L. Auricle.

2. HEART.

Auricles contract to-
gether, and send blood to
Ventricles: Auriculo-Ven-
tricular Valves close.

Ventricles contract
together and send blood
into Arteries: Arterial
Valves close- preventing
backward flow. Valves held
firm by Tendinous Cords or
their shape.

Pulse Rate: 70 to 80
per minute.

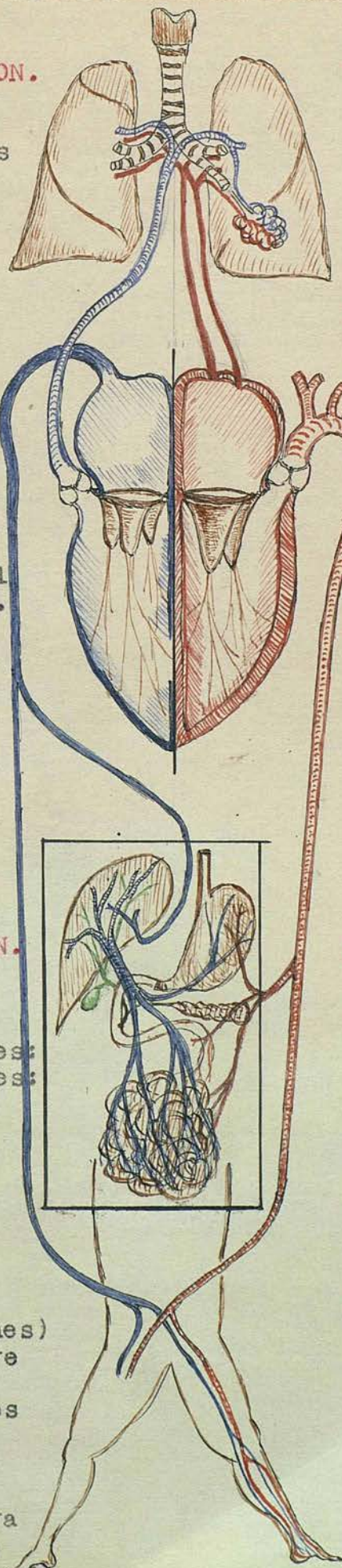
Heart Sounds made by the
closing of the Valves.

3. SYSTEMIC CIRCULATION.

Pure blood goes from
L. Auricle to L. Ventricle
& from L. Ventricle to
Aorta: then by Arteries &
Branches all over the
"System" in Capillaries,
giving up Oxygen & Nour-
ishment to Tissues; then
passes into Veins, collect-
ing CO_2 & waste from
tissue change; then back
by Vena Cava to R. Auricle.

4. PORTAL CIRCULATION.

Gastro-Intestinal
Veins absorb all soluble
nourishment & carry it to
Liver by Portal Vein FOR
Storage; Excess kept in
Liver: Rest passes on in
other veins to Vena Cava
& R. Auricle with ordinary
impure blood from System.



complete efficiency and all the steps and stages along the road by which it was hoped that end would be attained.

Elementary Training.

It would be tiresome and would serve no useful purpose to recount here the details of that early instruction in Anatomy, Physiology, Medical and Surgical Nursing with all their modern adjuncts, Bandaging, the application of Splints, and the treatment of Fractures and of the wounds of war, which was thus feverishly carried on, but in all these subjects a firm foundation was laid, and specimen diagrams are here appended from the series I then prepared to facilitate the teaching of these willing but ignorant men. (PLATES IV and V) And as soon as the first part of their education had been completed they were gently guided through more advanced paths of knowledge, and specialism was cultivated in every possible direction. Extra tuition and practical work of every kind also went on continuously along with the automatic absorption of the necessary atmosphere of military service and of Army life.

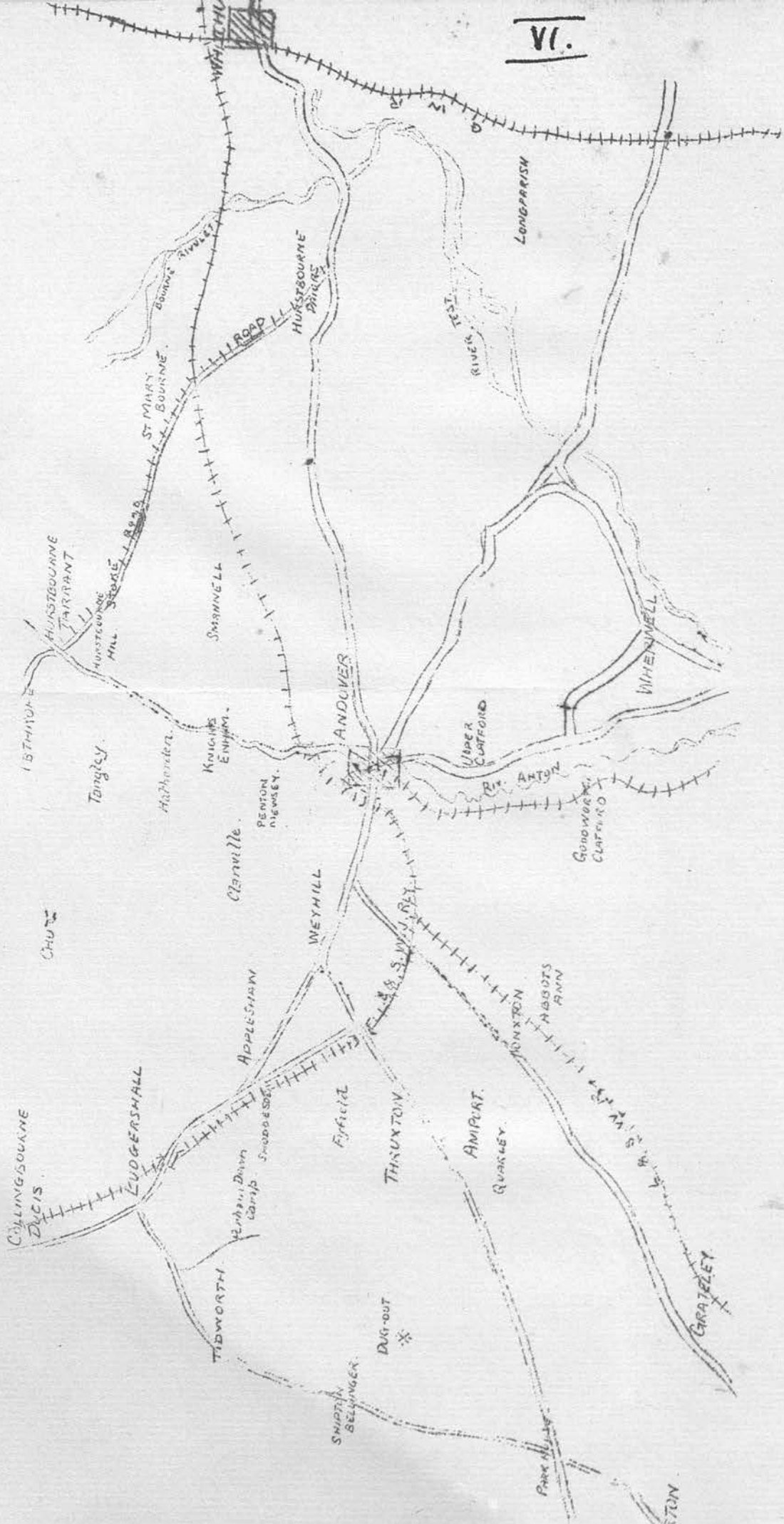
Bad days found us all at work in-doors from dawn till dark in the never-ending pursuit of knowledge and skill, while the finer weather saw the whole unit out and busy in every branch of Field Work and military Engineering with which the exigencies of life in the open seemed likely to demand familiarity.

Field Work.

But work as we might and did, our time was by no means at our own disposal. For by this time we formed part of a complete Division, the 61st, which like the rest included three Infantry Brigades, to each of which one Field Ambulance was attached. Ours being no exception formed part of the 184th Brigade, and we were therefore to some extent under the orders of its Brigade Commander, though like all Divisional Medical details we also acknowledged a specialised and administrative allegiance to the A.D.M.S.

Thus we were liable to be ordered out at any time to accompany the Brigade on its field operations, partly for our own instruction and practice, but equally for the medical and surgical welfare of any of the Brigade personnel who might perchance be injured in these bloodless battles.

The rôle of the Ambulance on these occasions had hitherto been one of barren and fruitless indolence but it was not difficult to effect a radical change in this, so that their listless and apathetic boredom was abandoned for an active and intelligent interest in the events of the day. A few desultory make-believe casualties were but a sorry substitute for reality and were incidentally much more difficult to treat, so these and other officially recommended activities were ruthlessly scrapped, and attention was for the time

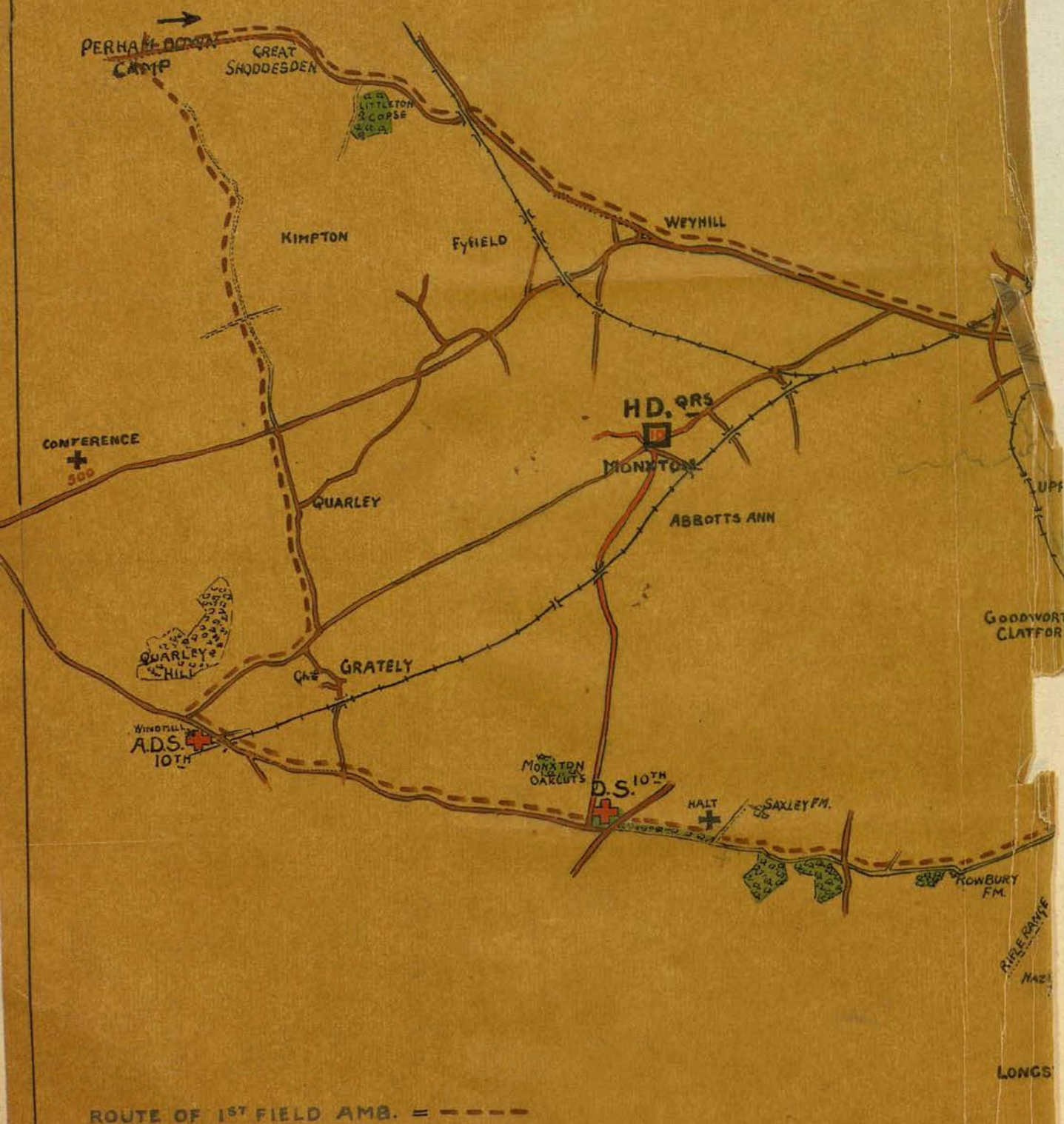


MAP OF OPERATIONS :-

2/1st Field Amb.
G.I.P. (SM) Div.
May 8, 1916

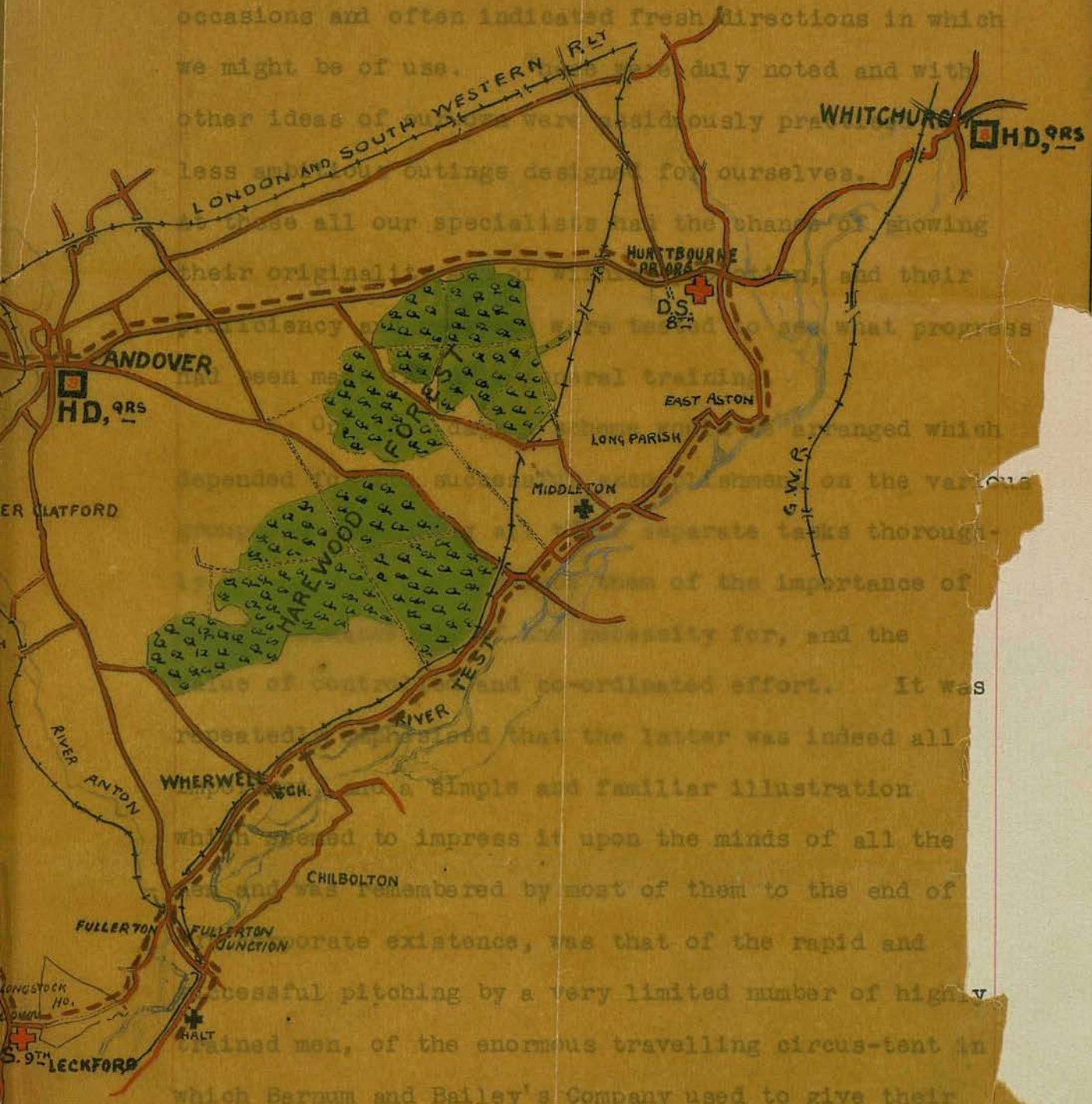
being focussed entirely on field-work in all its infinite variety, and this by methods which to our men were altogether novel and unheard of.

Advance copies of the proposed scheme of operations could easily be procured, and when a précis of them had been prepared, a lecture illustrated by large scale maps and blackboard sketches, indicating their probable course, was given to the whole unit. Skeleton maps of the area involved were then prepared and duplicated so that every man, whether he Ambulance orderly or Transport driver, had one of his own both at the lecture and during the operations. These (PLATE VI.) maps they were encouraged to study, to identify the places through which they marched, and also to add their own notes and comments on the progress of events from their own point of view. As a result, hitherto unsuspected talent in draughtsmanship and in other (PLATE VII.) directions was discovered and carefully fostered, and after a second lecture in which the operations were reviewed, the men had their maps and notes criticised and corrected. In this way interest was aroused and emulation stimulated, and field days became a reality of hitherto unknown value, and were voted pleasant entertainments, to be eagerly anticipated and of great and lasting benefit to all concerned.



MAP OF DIVISIONAL FIELD
SCALE 1 INCH

Unlooked-for incidents were not infrequent on these occasions and often indicated fresh directions in which we might be of use.



other ideas of... were... duly noted and with... less... outings designed for ourselves... these all our specialists... the chance of showing their originality... and their... progress... had been... training... arranged which... on the various... separate tasks thorough... of the importance of... for, and the... It was... that the latter was indeed all... a simple and familiar illustration... which seemed to impress it upon the minds of all the... and was remembered by most of them to the end of... existence, was that of the rapid and... successful pitching by a very limited number of highly... trained men, of the enormous travelling circus-tent in which Barnum and Bailey's Company used to give their famous shows. This was taken as a model for all our team-work of whatever kind, as it showed how any well-organised concern could by rehearsal and practice be

OPERATIONS, MAY 8TH, 9TH, 10TH, 1916.

1 MILE R.F. 63360

Unlooked-for incidents were not infrequent on these occasions and often indicated fresh directions in which we might be of use. These were duly noted and with other ideas of our own were assiduously practised on less ambitious outings designed for ourselves. At these all our specialists had the chance of showing their originality and of winning promotion, and their proficiency and resource were tested to see what progress had been made in their general training.

On other days a scheme would be arranged which depended for its successful accomplishment on the various groups engaged doing all their separate tasks thoroughly and to time, to convince them of the importance of mutual reliance and of the necessity for, and the value of controlled and co-ordinated effort. It was repeatedly emphasised that the latter was indeed all important, and a simple and familiar illustration which seemed to impress it upon the minds of all the men and was remembered by most of them to the end of our corporate existence, was that of the rapid and successful pitching by a very limited number of highly trained men, of the enormous travelling circus-tent in which Barnum and Bailey's Company used to give their famous shows. This was taken as a model for all our team-work of whatever kind, as it showed how any well-organised concern could by rehearsal and practice be brought to that pitch of complete and ordered perfection which was now our aim in every department of work

and duty.

The necessity for thorough and constant rehearsal though very obvious and essential in ceremonial and other forms of military parade and drill, had seldom in my experience been used in matters medical or surgical as it should have been. Even in my early days as a junior dresser, I had often been amazed how details in the conduct of important operations were frequently left to the mercy of hazard and caprice, making the result, which in those days was in any case none too certain, almost entirely a matter of chance, and this even in cases where any failure might entail the loss of the patient's life.

This had always seemed to me an extraordinary thing when we knew that in the same building any theatrical performance which could not in the nature of things be of any real importance to any one, was never allowed to be staged until, after arduous and painstaking practice it had reached a state of meticulous accuracy and perfection.

Hospital Work.

Nor did duties such as these complete the tale of our daily effort for besides all our ordinary work and training we were at this time in charge of and responsible for the conduct of three different hospitals.

Two of these were of small size, one of 24 beds being the military isolation hospital for the

district, which during the previous year had been principally occupied with cases of Cerebro-Spinal Meningitis. Fortunately during our time we had nothing more serious than the ordinary exanthemata, but the place had to be efficiently worked, and administered in the cumbrous Army way, which meant much office work and the wasting of much official paper.

The other had about the same number of beds and was merely a ward in the local workhouse Infirmary allotted to us for the treatment of our cases of Scabies and Impetigo. These unfortunate people had originally been housed in decrepit and mouldy marquees, but the advent of snow had rendered these more rat-infested and less habitable than usual, and after we had made a violent and most un-military agitation, we were reluctantly allowed to transfer the cases to warmer and more sanitary quarters.

Here the men learned our methods of dealing with these skin affections and also the details of several different ways of disinfecting the uniforms and blankets, including that designed by Thresh, the local M.O.H. and this training proved of most particular value when as will be seen later, we were suddenly called upon in France to undertake similar duties without much warning and with little or no assistance from anyone.

But the chief centre of our Hospital life and activity was "Oaklands", a large house on the outskirts of Chelmsford, which had been taken over as the Divisional Military Hospital for this area, and which

after being in military hands for nearly a year, was still a by-word among all the troops who had any acquaintance with it. And it was with full knowledge of this disfavour that we took it in hand, determined that at all costs it must be revolutionised and brought thoroughly up-to-date. Being only for sick soldiers during their training, it had never found favour in the eyes of an Officialdom whose profligacy and parsimony were equally ill-proportioned, and it is not too much to say that its condition was a disgrace to any civilised community.

The first thing that attracted our attention was the large staff of men said to be necessary to run the hospital, and we saw that if their number were not materially reduced our out-door work and training would be seriously interfered with. A host of men were supposed to scrub all the floors two or three times a week, a most futile performance for with the traffic within and the all-pervading mud without, it was beyond the wit of man to keep the place evenly decently respectable. This we changed very soon for by working continuously day and night, we managed to stain with Condyl's fluid and polish with bees' wax and turpentine, most of the floors in the house in a few days, thereby effecting at one blow both a striking improvement in the appearance, comfort and cleanliness of the place, and a great economy in the

necessary personnel. Some of the pther floors still boasted the ingrained dirt of years, so these too were scoured and scraped till long hidden parquetry designs were again unearthed and these were finally smoothed and polished also. Many of the rooms bore decayed and peeling wall papers with massive curtain poles and adventitious ornamentation of early Victorian type. The latter followed the remaining civilian furniture to the cellars and we began to agitate for distemper and paint.

After many heated and bitter contests with the local military Engineers, three rooms were done and a reluctant authority was persuaded to do a fourth. Then Providence intervened and permitted the erroneous admission of an early case of Measles, whose actual complaint was however not divulged until by 'judicious indecision' he had been made to infect three different rooms. These were promptly sealed and disinfected by formalin steam with quite unnecessary severity, until by furtive whispers of the grave possibilities of an epidemic, authority as ignorant as it was obstinate, gave a hesitating order for the painting of rooms "F", "G", and "H". All the rooms were distinguished by cards bearing the letters of the alphabet on the doors, and these could naturally be moved, and therefore it is scarcely surprising that when the official painters had indeed completed three

rooms they were entirely at sea as to which they had done and which they had missed. Paint as they might and did, the only thing they realised was, that rooms "F", "G", and "H" never seemed to get done. Eventually they struck but their obstruction was short-lived, for a day or two later we admitted with great delight a case of suspected Small-pox, and during the succeeding period of "wind-up" and the inevitable orgy of vaccination and quarantine, by keeping our minds firmly fixed on the matter in hand, all opposition was at last overborne and the painting of the whole house was finally completed. This is merely recorded here to show how impossible it was to get the Military Medical people to take a stand and use the powers they undoubtedly possessed, and how therefore those in subordinate Command had to stoop to subterfuge and prevarication to accomplish the most necessary and elementary things, the importance of which even such authorities as we did have might have been supposed to appreciate. But no! far more important was it from their point of view that their weekly lists of erroneous statistical details should be accurate enough to tally with those of their neighbours, than that the comfort and welfare of their sick and wounded should engage the best attention of all their available staff.

After this we had other minor difficulties about alterations and re-arrangements of the rooms and wards, to simplify the work and increase the comfort of the patients, and about the provision of

accommodation where the convalescent men could have their meals and recreation, but ultimately by the constant support of Lord Salisbury, the Divisional Commander, to whom we never appealed in vain, all these things were satisfactorily arranged and the official enemies of what were considered our extravagant ideas confessed themselves beaten and all was peace.

Shortly afterwards a disused Church Army hut was procured for us, and the whole unit having for the moment turned carpenter this was quickly cut into sections and removed to our grounds, where it was as quickly erected. This was eventually connected to the main building by a corridor built by our own men and was in time suitably decorated and furnished as a recreation and dining hall for the patients, the money being raised among my own friends and former patients who were anxious to do for our invalid soldiers what the military authorities were apparently unable and unwilling to perform. It is not too much to say that the whole hospital ultimately became a great success, and we felt amply rewarded for all our work by the generous appreciation of the patients and by the congratulations and thanks of the Divisional Commander when he came to say good-bye.

This general sketch may be said to include in outline the first and more preparatory portion of our training, and a summary of it is appended. to show in greater detail what we had by this time actually succeeded in teaching the men.

DETAILED SUMMARY OF TRAINING.

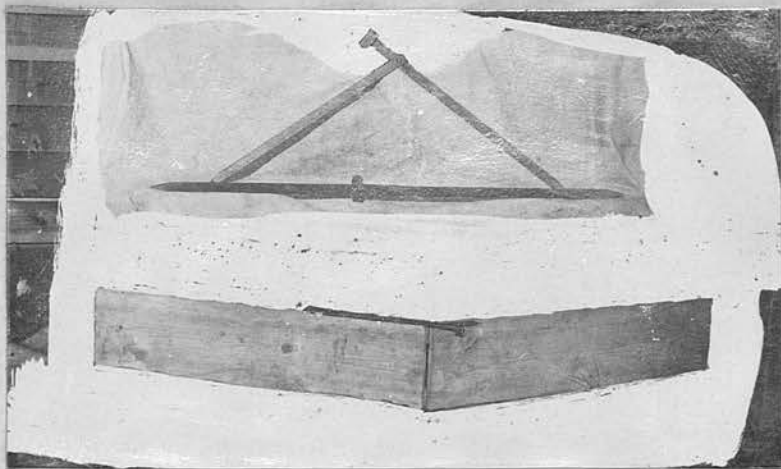
1. The Collection and Transport of the Wounded.

In arranging for the routine practice of this important part of our work, and in seeking to make the preparation resemble as closely as might be the known realities of war, we had to discard almost at once practically all the available official instruction, for it savoured much more of the parade ground than of the battlefield. It was however all that our men had learned in their early days and it was urgently necessary that it should now be changed and that the close proximity of a vigilant and ruthless enemy should be always in their minds, and be made as real as possible in all their work. First of all we taught them the continual necessity for cover and concealment and the importance of silence and speed. The official luxury of having six and even four men to each stretcher was abandoned and the available complement reduced to two when the 'going' was at all reasonable, though in deep mud, morass or heavy soil, or when the weight of the wounded man was exceptional, four might still be reluctantly permitted.

Stretcher bearing in this less attractive if more realistic guise was practised constantly over all kinds of ground, in fair weather and in foul, both in the daylight and also and more particularly in the dark. The bearers practised in large groups and in isolated parties and were shown how to find their way without maps by day, so as to cultivate their sense of position and direction by reference to fixed objects, and when working at night they had similarly to find out every available guide which might help them, no matter whether it were on earth or in the heavens. They searched the scenes of imaginary engagements for concealed casualties, and swept in line over defined areas for the same purpose, and learned by means of runners, signallers, and connecting files to keep up some kind of intercommunication between their groups, without constant reference to their own Head Quarters. Marching by compass and rapid movements by night over unknown ground were also insisted upon, and if these caused a good deal of bodily discomfort and provided a liberal education in the art of adequately expressing their feelings, they also taught them the value of mutual help as well as of self-reliance, and encouraged resource and independence which was made such an important essential quality in all their work.

This done, we borrowed some ground recently occupied by a school of instruction in "trench digging",

VIII.



where a complete network of trenches had been dug by experts sent home from France, and there in all conditions of weather, and in every degree of physical discomfort and filth, we practised the rescue of wounded men among the zig-zags and traverses of an actual trench system, a difficult and often a heart-breaking job.

Here we found that the ordinary regulation stretcher was of little use, and the official substitutes of those days, little better, so I devised one of our own and with it for a time we had some success. Then seeing the comparative futility of trying to dress a wound even in the most elementary way in heavy rain in a muddy trench, I had made also a sort of trench-shelf on which to support the man during the process and this too we used on many occasions. ^(PLATE VIII.) These articles were not produced so much for their intrinsic value as to help to stimulate the art of improvisation and resource among the men.

Once clear of the actual trench area, the removal of the wounded presented little difficulty except that we of course had no motor Ambulances with which to get familiar, and had therefore to make shift with the old-fashioned heavy pattern horse-Ambulances which were the summit of Military Medical forethought and ambition in August 1914. These relics of a past which should have been long dead and buried were of little use, and though we took three of them to France

with us they were of but slender service there, and should all have been scrapped except that having been brought out by the order of some beribboned genius, their presence had to be justified somehow. We did occasionally use them for the leisurely conveyance of our milder cases of sickness, and once or twice for other purposes equally valuable if less regular and essential, which may perhaps be mentioned further on! (PLATE IX.) During training however they were in constant demand and we also practised fitting up ordinary G.S. and other waggon and carts to carry both stretcher and sitting cases, lest one day we should be faced with such enormous hordes of wounded that all ordinary methods of transport would be swamped. We carried patients in boats too, and manufactured rafts and litters, improvised pack-saddles and almost every other imaginable mode of moving a wounded man, in some sort of comfort, so as to assist and relieve when possible the weary steetcher-bearers.

And after I had paid at my urgent request, a visit to the Army in the Field, we found on Salisbury Plain a disused dump of light-railway lines and having seen similar light railways in use in France as trench tramways, we laid a complete system from a series of trenches which we had taken over for further practice, to an Advanced Dressing Station we had built and dug, and when we had constructed two trolleys to our own design, we brought our wounded down on them. In fact we there carried out the collection of wounded

IX.

ONE USE FOR A HORSED AMBULANCE WAGGON !



" OFF TO THE RACES "

exactly as it was being done in the War area, and that in complete detail even to using the actual forms of casualty returns which I had brought back with me, so that when our men went out they had practically nothing more to learn.

2. Surgical Work.

This was of course practised in every variety and detail, and after the principles of asepsis and antisepsis had been thoroughly driven into the minds of all ranks, the manipulation of damaged men was rehearsed in endless variation, until all ordinary wounds could be smartly and efficiently dealt with under any circumstance, without the fundamental principles of modern surgery being unduly infringed. Speed was cultivated in every case but never at the expense of thoroughness, and responsibility and strict attention to detail ceaselessly enjoined upon all.

One day we would concentrate on the rapid dressing of a large number of slight wounds, and on another we would have only a few cases out for collection, but their operative treatment would be carried out in every particular to the extreme end. A message would be signalled to the temporary Head Quarters in some barn or cottage, that an important case with a perforating abdominal wound was being brought in, and orders would be issued to prepare for an immediate

operation, and this would be very quickly done. A clean tent would be pitched, the table and other accessories got ready, sterilisers set agoing, and everything else prepared as if for actual work so that by the time the patient arrived, we were quite ready to start. He would then be transferred straight to the table, and in the absence of reality the whole operation would be gone through in elaborate make-believe, each instrument being handled and each step explained to the assembled Nursing Orderlies. Indeed so realistic did these practices sometimes become that on one occasion, one strong Orderly collapsed on the ground in a dead faint where he was left to recover by himself, while the more pressing business of the moment was carried on without interruption.

The scheme for the reception of the wounded was worked out with great care and by arranging it in a methodical way and making that compulsory, we developed remarkable speed in dealing with large numbers and also achieved a surprising economy of labour.

A special staff removed the man first to a preparatory department which though it might be merely one end of a tent, was still a separate and definitely allotted place, and there while the clerk was writing down his particulars, one group of men known as the "dirty orderlies" quickly prepared the patient for dressing. They were armed with huge tailors' scissors of which

we had purchased six or eight pairs, and with these the most mud-caked trousers and the wettest and most blood-soaked tunic or puttee could be slit to ribbons with the minimum of effort and delay. Thus free access to every wound was quickly gained, and if his stretcher were badly soiled, the patient was transferred to better surroundings without the hands of the "clean orderlies" who were waiting to dress him, being involved in any of these more filthy processes.

Resuscitation, the treatment of Shock, the Arrest of Haemorrhage, and all the other known Surgical emergencies had their place in our scheme, and their days for special practice in our list of outings, and after pretence had been confirmed by real work in the Hospital wards, we began to see evidences of that coolness and confidence in all directions which only familiarity can beget.

The Clerks and their duties have been casually mentioned above, but the necessity for prompt and accurate returns in military life was always evident, and though this was no excuse for allowing them as some did, to become an obsession to the detriment and even the exclusion of efficient medical and surgical treatment, still their overwhelming importance became abundantly apparent to me during my tour at the front.

The Official Casualty Lists were perforce compiled from the Field Ambulance Returns, and it required but little thought about the domestic side of the tragedies which were being hourly enacted in France, to show us how much we could do to avert that extremity of sadness and uncertainty, which was the abiding lot of so many of those who were compelled to wait quietly at home.

This made us devote much thought and care to the choice of those who were to be responsible for this important department, and after frequent practice with the forms which I had brought back we were able to rest assured that in this branch also, our experts were thoroughly and efficiently trained before we went across. And thankless and obscure though their lot, and slender their chances of distinction or reward, right well did these men perform their ceaseless duties, dull, mechanical and very tiresome though they inevitably were.

3. Medical Work.

An enumeration of the details of the purely Medical work and Nursing which occupied much of our training time, is unnecessary. We had a sufficient number and variety of cases to ensure that the practical instruction was comprehensive enough, and we arranged that for two hours on four evenings a week, an emergency skeleton staff should run the

hospital, while the day and night orderlies together attended lectures and classes in the recreation hut, so that their knowledge might be expanded and their experience condensed. We were fortunate in having two senior N.C.O.'s who were in civil life, wardmasters in a workhouse Infirmary, and the orderlies under them, having taken to this work entirely from natural affinity and choice, made rapid progress and soon gave evidence of remarkable aptitude and ability. Specialism was here too cultivated and encouraged, and massage and other extra duties were taught as opportunity offered. The reduplication of every duty was also kept in mind, and we took care that no matter how important a man might be, his understudy was always detailed by name and was ready at once to take on his job, should he from any cause become unable to carry on.

Here too, we had ample opportunity of organising large sick parades and to practise the rapid and systematic handling of large numbers of men, for it was no uncommon thing to have suddenly to face, in addition to the ordinary routine work of a morning, the vaccination of a whole Battalion, or the anti-typhoid inoculation of from five hundred to perhaps a thousand men.

Accidents, Medical Boards, Courts of Enquiry, the observation of doubtful mental cases, and all kinds of ordinary and unexpected emergency work also came in

as in any civil Hospital, so that by the time we left Chelmsford, there were few likely or unlikely circumstances with which we could not boast at least the familiarity of some previous experience.

4. Camps and Camp Life.

Much has been written and much more could still be penned on the camp life of the budding soldier in the early days of war, but ours did not differ notably from that of other units. During our training time we lived like others in billets, huts, bivouacs, and tents, and investigated and sometimes solved their various and recurring problems. We stood aghast at the state of some of the camps, and thought hotly of the codes of honour of those who built them. We marvelled that one Infantry camp should have its drains flushed with water, while the Artillery near by should not only have no water pipes at all, but not even a stream at which their parched horses might drink.

These things however, though they concerned us much at the time, have little bearing now on the matter most in hand.

Our own camps we took seriously enough and altered them to our own requirements regardless to the interference and the susceptibilities of those hide-bound officials who were supposed to look after

them and us. Our chief and main concern was the health and happiness of our men and our neighbours, and both of these we nearly always succeeded in achieving.

Much time and energy had however to be expended in the reconstruction and re-organisation of the several conservancy systems, for there was no consistency in Camp design and indeed many Sanitary and other conveniences had to be either improvised or radically altered. Like everything they also required constant watching to keep them in working order, but on the whole, Camp Discipline though strict was easy and well observed. The usual measures were in vogue to keep the men fit, physical exercises, route marches, and other ordinary drills and recreations being ordered as required, while personal cleanliness and general smartness and tidiness were rigidly exacted and enforced by constant supervision. Closely allied to these was the provision of suitable drying rooms which were very necessary and as they were always missing from an ordinary camp we had to build them ourselves.

Then if the men were to be exercised they had also to be fed, and that entailed endless work and anxiety both as regards the collection, storage and handling of the actual rations, and their ultimate cooking. Cook-houses, and their construction and repair, fires and ovens of all types and kinds were

studied in the greatest detail, and the time thus occupied was well spent for there is no doubt that successful cooking was one important key here as elsewhere, not only to their health and happiness, but also to those of the hundreds and eventually the thousands of other troops who were committed to our charge. This art besides being ardently practised was taught to our Officers and Men until they could all draw their raw rations in the morning, confident that under any reasonable conditions of weather, they could cook them simply maybe, but still in a clean and satisfactory manner. But little cooking was possible without a supply of wholesome water and this formed one more anxiety, for the provision and regular testing of water suitable for drinking, took up much of our time and employed almost exclusively several of our best men.

Each Section carried as one of the most important and most valuable parts of its equipment, a Regulation Army Water Cart with its clarifying and purifying apparatus, and each cart was in the charge of its attendant orderly. But we did not rest satisfied until every Officer and man in the Ambulance had also been thoroughly trained in its use, and was capable without help of finding, testing, chlorinating and guaranteeing a suitable supply for any isolated and

detached party no matter how small or inaccessible.

Our waggons and equipment were another department which though they were like the rations, more particularly the province of the Quarter Master, remained still as much our united care as everything else, and required the same constant vigilance, for a defective waggon could at any moment prove quite as fatal a handicap as a sick or injured horse or a decrepit set of harness.

And when the men and all their needs had been dealt with, there yet remained the horses of which we had over fifty. They required an infinity of training and as much care as did their harness and their stable accommodation, and for all these in the early days, the Commanding Officer was of course solely responsible. The Transport men had to be taught to ride and drive, and how to fathom all the mysteries of horse-mastership and management, of farriery and of harness-fitting and repair and a multitude of other details of equal importance. Parades which followed each other in quick succession had to be taken by some one in authority, and what with Orderly Room work, discipline, hospital emergencies, and the vicissitudes and exigencies of ordinary Administration, it is scarcely difficult to realise that each day was very fully occupied and that for those in authority there was never time to weary, and little time to rest.

5. Administration.

The Administrative Duties which have been mentioned so often included not only the originating, the management, the supervision and the control of every branch of work and duty, but also the training of the junior Officers and senior N.C.O.'s in all the manifold details of Army Routine and method common to all units of whatever kind. No catalogue of its ramifications could ever be made complete but among other things it embraced the collection from Ordnance and other sources, of the whole of our Mobilisation Equipment which was issued to us in dribblets as manufacture made it available, and had to be checked examined, tested and finally arranged till every man knew each box and package and hamper, and was equally well informed as to their contents and the uses of each individual article. This in itself was no small matter but was merely one item in the ceaseless succession of jobs which had to be done promptly and without delay. Every service affecting the men, the horses, the clothing, the materiel, the housing of the unit and its possessions, the discipline of the personnel and of the patients, the requisitioning of moneys for payments of men and billets and the keeping and auditing all the accounts, the checking of allowances and the procuring of extras and comforts as well as the provision of relaxation and recreation when possible

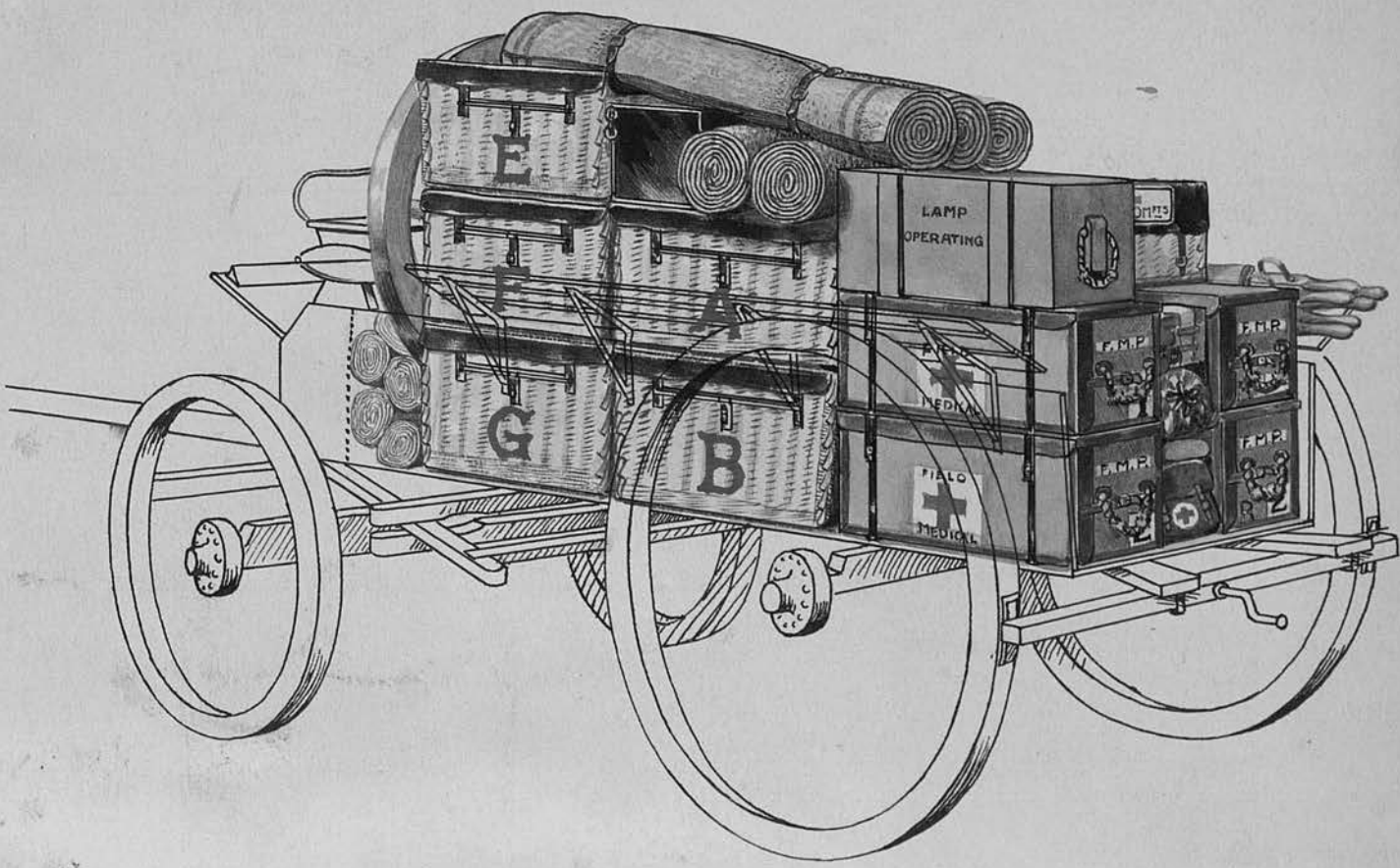
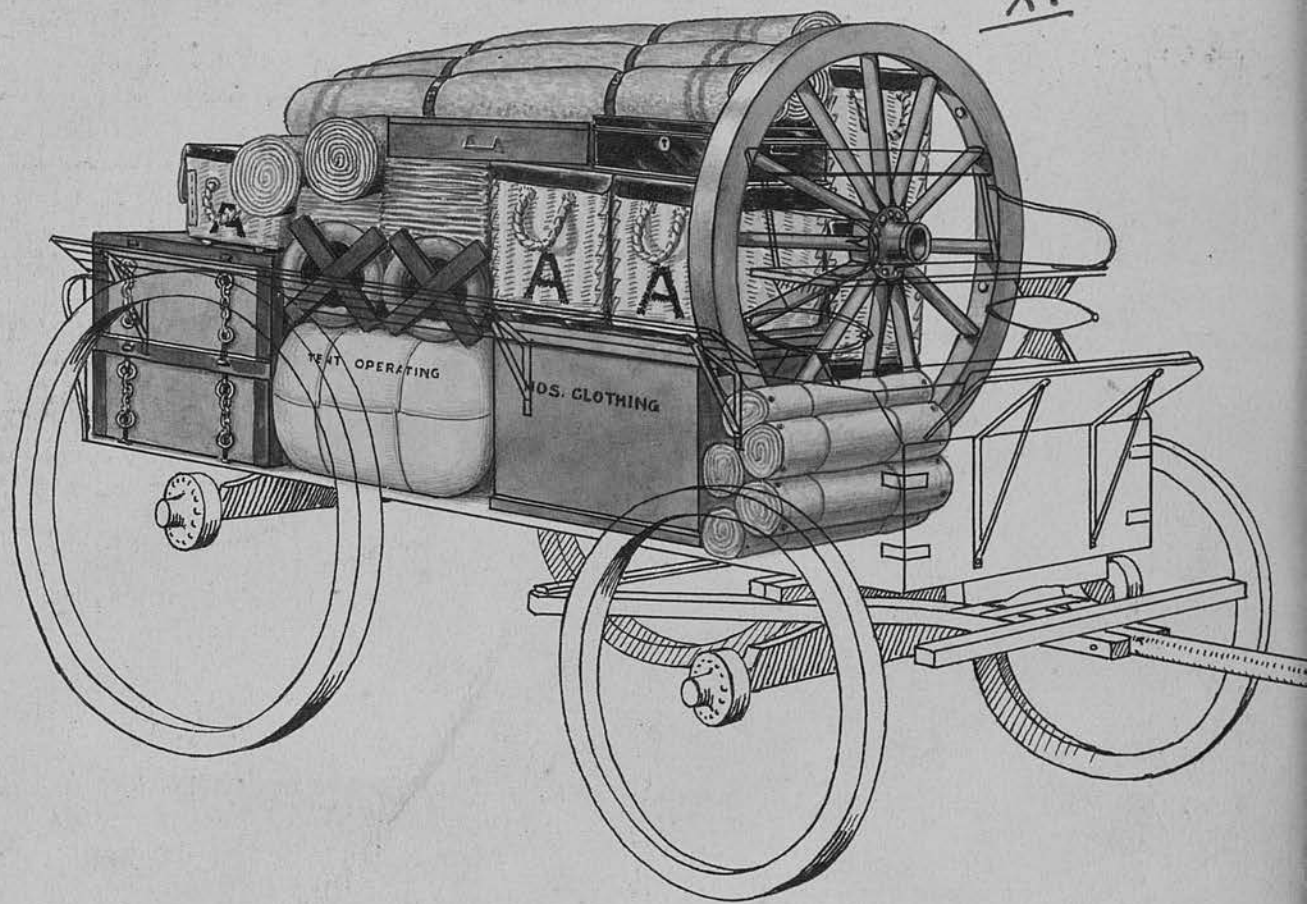
for all, with also the supervision of all the complicated hospital and other returns, represented an amount of detailed labour which can scarcely be credited by anyone who did not take part in the process. And it may perhaps be more fully appreciated, when it is realised that this was in fact accomplished by myself with the help of one good but inexperienced Officer, and my Quarter Master, an excellent and most capable and energetic man though not of course trained in Medicine, with a part-time civilian practitioner to assist in the hospital work in the mornings.

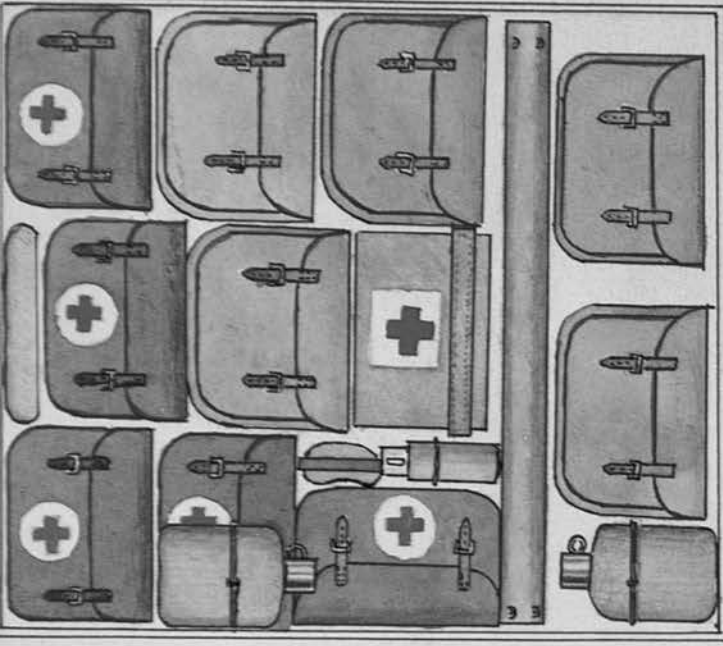
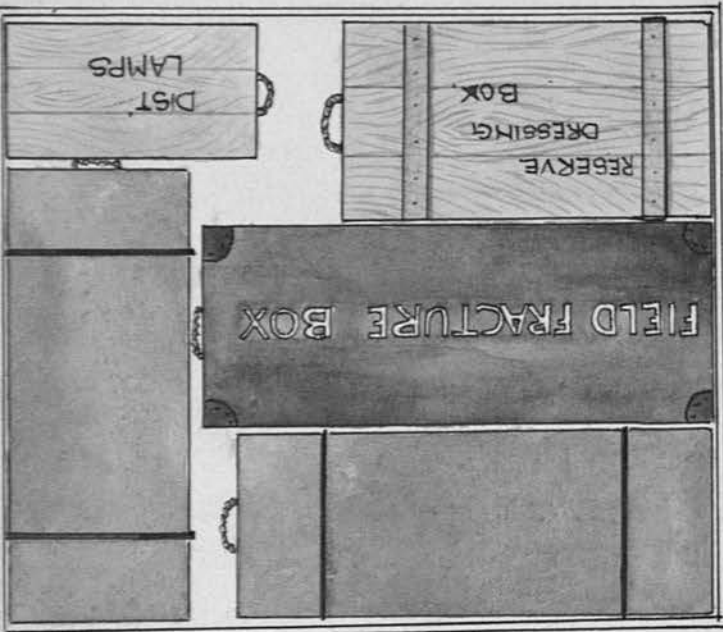
The question of our easy and prompt mobility and the importance and difficulty of ensuring it, was borne in upon us on many of our Field Days especially when we were working principally by night. It was partly this which led us to train some of our men with special talents in this direction, in all the subtleties of surveying, field-sketching, and map-drawing, and so valuable and accurate did they eventually become, that within a week of our arrival in France they were transferred to our Divisional Head Quarters and given employment there as the expert map-drawers for the General Staff, for whom they executed every confidential map ever issued by our Divisional Authorities during the whole subsequent course of the War.

When our equipment was at last complete we found that it had to be carried in certain vehicles,

and how to arrange it in them so as to ensure simplicity, equality of load, and the immediate and rapid accessibility of every article under any circumstances, with ease and rapidity of repacking any wholly or partly dismantled load demanded a great deal of hard work and much "clear thinking". We all however tackled the business in the usual way and when any one in the unit could go to any pannier in the dark and find any article required without fumbling or wasting time, it did not take long to allot the appropriate packages to each waggon. This done, scale diagrams of the empty waggons in perspective were drawn by the mappists, and each article was drawn in, in its appointed place also accurately to scale. These were then (PLATE X.) coloured and reduplicated, and when definite crews had been detailed by name for each vehicle we practised packing, unloading and re-packing till the whole process became automatic and could be done as quickly and effectively in the dark as by day. The Transport men also practised harnessing and hooking-in by night as well as day until one night, the "alarm" having been blown at 11 p.m., the whole unit marched out of camp complete, all the waggons packed, sheeted and roped, and all the horses properly harnessed, ready to go to France if necessary, at 11.27 p.m. To appreciate this properly one must add that the Transport men lived quite 500 yards from their horses and their waggons,

X.



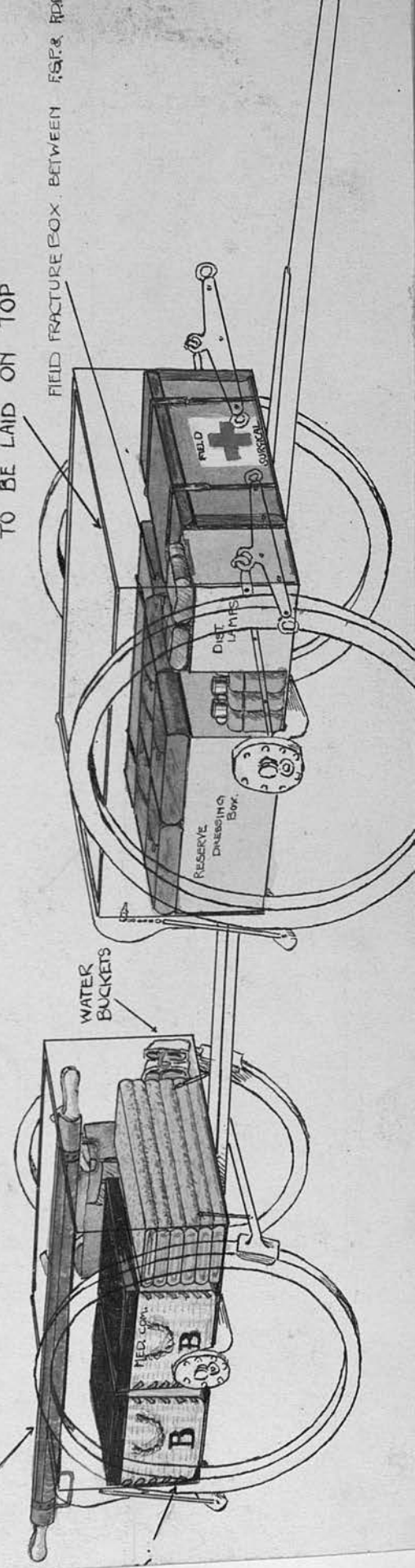


METHOD OF LOADING B & C LIMBER WAGON

1ST FIELD AMBULANCE 61ST DIVISION

STRETCHERS • DIRECTING FLAGS • HOSPITAL FLAGS ON TOP

SURGICAL HAV. AND OTHER EQUIPT.
TO BE LAID ON TOP



that the road to the stables was an absolute quagmire, and that all the men were in bed when the bugle was blown, and quite unaware that any test was even contemplated.

6. Construction and Engineering.

It was perhaps not altogether unfortunate for the unit that a strong natural bent in this direction on my own part, and a fairly wide experience in it, led us all to take this department somewhat seriously, partly as a necessary study, but partly also as a hobby, at once a most valuable asset for any unit, and a suitable relaxation from more strictly professional pursuits.

We had in our ranks carpenters of high quality, plumbers, bricklayers, and amateur mechanics of various kinds, and of them and their talents the fullest use was made. Army tools being inadequate others were purchased freely, and many of the men when interested brought their own, so that very soon our ventures in the realms of construction were as varied as they were ambitious, and in no branch of usefulness did the unit while in France achieve greater triumphs than in this, the provision of emergency premises and accommodation for every possible kind of purpose.

All kinds of building were tried and practised and one morning having announced with every appearance of conviction that we had to find room for three cases of Small-Pox and their attendants, one party of men with nothing more than a rough sketch, and what rough materials they could find lying about, actually built

in four hours a sound and suitable three-roomed shelter made from wooden posts, branches, water-proof sheets and waggon covers, which if it scarcely suggested permanence, was still infinitely more healthy and more wholesome than many of the places we have all been glad to accept and to occupy since we have made a closer acquaintance with the rigours and realities of war.

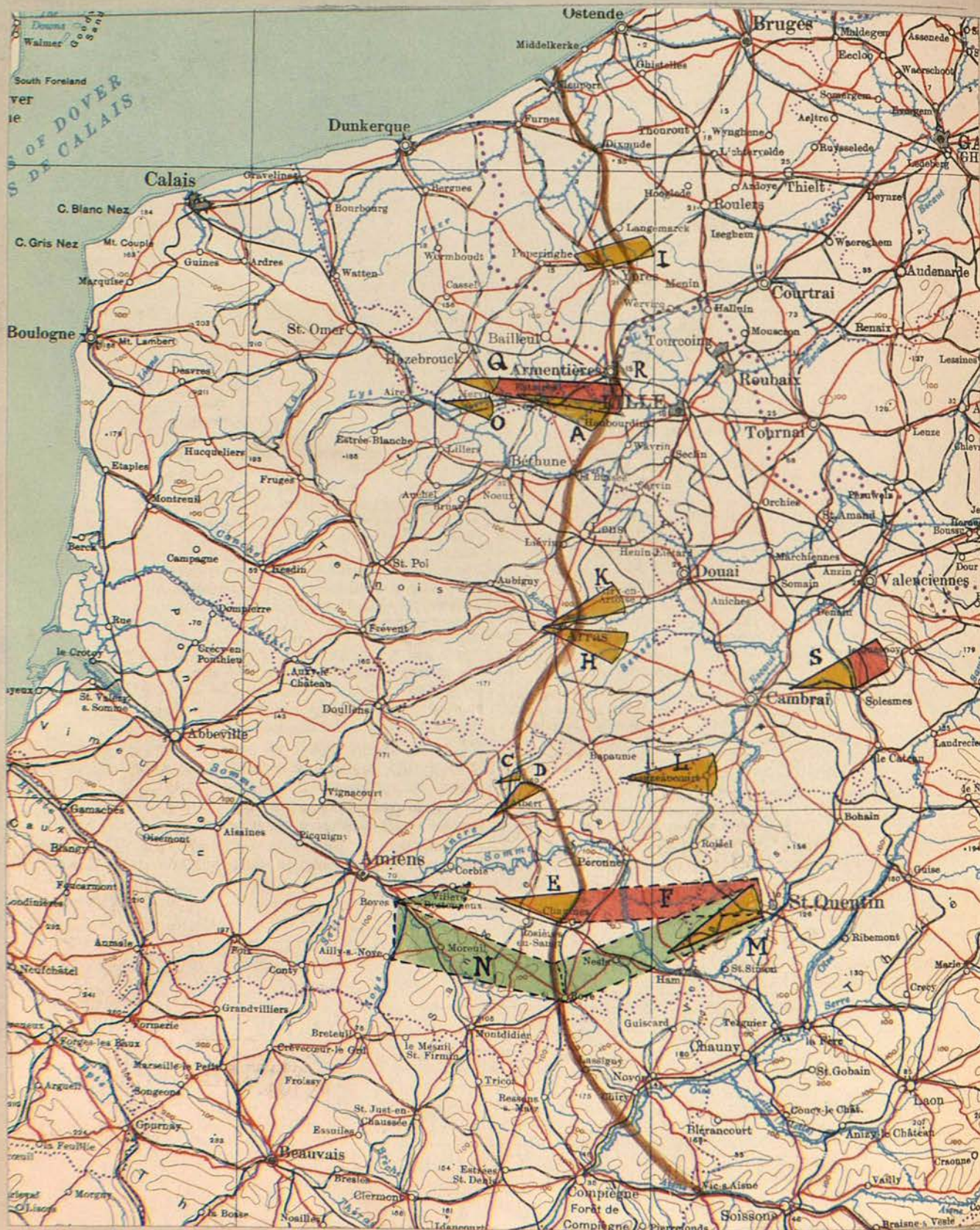
After my return from France this type of work was further developed, and to building we added the construction of fortified and protected posts, and the digging of substantial dug-outs which we practised in considerable detail on Salisbury Plain. There we constructed a large Advanced Dressing Station consisting of one large semi-sunken dressing room with its roof and walls heavily protected and sandbagged till they might be considered splinter-proof, and from this we excavated a tunnel which sloped down into a second room twenty feet under ground, supposed to be for use during heavy shelling. From this we drove a gallery in which to store patients in safety and also an alternative exit by means of a sloping passage which reached the surface some distance away. Along this was laid a tramway line up which by means ^{of a} suitably tilted trolley which we also made, the patients could be evacuated in comfort. The whole of the work was designed by myself and carried out by our own men

XI.



among whom we had four expert miners, and it was generally considered one of the finest bits of training work done by any of the units in our Division. (PLATE XI.)

Truly there was much to do, but all was done cheerfully and happily, and with a fragrance of perpetual and inexhaustible good humour, and if we sometimes could not but smile at the kudos reaped by those in high authority for the marvellous way in which they had succeeded in training the new armies, that was only because our own intimate acquaintance with the details of the enormous amount of work involved, showed us beyond any chance of doubt, who they were upon whom had fallen the real and most exhausting burden of that training, whose thoroughness was in the end to be so abundantly vindicated.



FRANCE : Scale 1:1,000,000.

Areas in which 61st Division
fought.- Yellow.
Our Advances - Red.
Our Retreat with Vth Army -
Green.

II. OUR WANDERINGS IN FRANCE.

Several weeks of strenuous work on Salisbury Plain served to put the finishing touches to all our long and tedious preparation for war, and we were at last judged fit to take our places in the line. We therefore crossed to France with the Advance Brigade of our Division, the first of the Second Line Territorial Divisions to take its place with the Army in the Field, and after a somewhat hesitating progress by rail and road through northern France, we reached our first billet in the war area without either incident or mishap. There next morning we paraded as complete and fit as when we had marched out of our home camp four days previously, and were put in good heart with ourselves by the receipt of a message of very hearty congratulation and commendation from the Railway Transport Officer at our detraining station, whom we had apparently though quite unconsciously astonished, by detraining all our waggons, horses and personnel, parading and marching out clear of the station yard, within twenty-three minutes of the arrival of our train. This was certainly under the circumstances not a bad performance, but had been accomplished without any undue effort on our part beyond our habitual desire to do all our work smartly and well.

Our billet was a French farm of the better type which by building here and adapting there, we quickly transformed into an ideal camp and hospital for the Brigade sick, with all its necessary and inevitable adjuncts. It was practically completed within twenty-four hours and earned the unstinted admiration of the Brigade Commander, who immediately ordered parties of Officers, N.C.O.'s and Men from all his other Units to visit it, to examine all our arrangements and copy them in detail. He also reported our work for favourable comment to Divisional Head Quarters, and thus were all the Officers and Men cheered and encouraged by such prompt appreciation of their efforts and the unexpected justification of the value and relevance of their early training.

After a few days' rest, one third of our personnel joined a Field Ambulance of the 38th (Welsh) Division in the line for eight days' instruction in the actual conditions of trench life, and on the following day our Division completely relieved the Welshmen who had been ordered off to another part of the front.

Thus our work began in earnest, and as desultory fighting was going on all the time our services were constantly in request. We soon found out that premises and arrangements which had satisfied our predecessors were not up to the standard which we considered both necessary and desirable, and we therefore at once

began to remodel the whole of the places to which we had fallen heir, and this done we settled down to absorb grim reality as eagerly as we had hitherto practised its less exciting and less dangerous counterfeit.

A. The Laventie Front: XIth CORPS.

In the light of our subsequent experiences, our first tour of duty on the front was almost a holiday, even though we did not think so at the time. Those of us whose work did not keep them permanently in the line were quartered in decent houses, most of them but little damaged, in the adjacent town of La Gorgue, where for our own Head Quarters and hospital we had the larger part of the local day-school with some additional accommodation near by.

In those days there was little attempt either by the enemy or our own troops, to shell towns and villages even a short distance behind the trench zone, and as the full extent and all the brutal ruthlessness of the war was at that period scarcely realised, there were civilians in plenty still living and pursuing their daily avocations within three and sometimes even within two kilometres of the actual British front line.

Here our principal duty was to collect the wounded from the left or northern half of the Divisional area, and to carry out their immediate treatment to a greater or less extent, depending chiefly on the

severity and character of their wounds. Their collection and removal were in this particular region comparatively simple, for the front was stable, the trenches well dug, the roads in good repair and the weather favourable. Routine work was of course continuous and everything was of interest for there was much to learn, and many details capable of alteration and in our view of improvement. The chief aim of all our changes was simplification and economy of labour and of effort, and the desire to make every possible preparation beforehand to cope with the results of heavy fighting, so that it should not take us by surprise and find us wanting, should it by any chance come upon us suddenly.

These alterations were in time accomplished and though their necessity had been rather haughtily questioned by some of those in Medical Authority, their completion was greeted with almost enthusiastic approval, and life went on for a few weeks in a quiet and harmonious fashion until there opened on July 1st 1916, the great Battle of the Somme.

At first this affected us but little and that only indirectly, but after its first furious attacks had spent themselves, in order to prevent fresh enemy formations being hurried south as reinforcements, our Division was ordered to attack the Aubers Ridge on our immediate front. This prospect was made doubly

interesting to us for it was our first battle on the 'grand scale', and also because the A.D.M.S. entrusted to me the direction and control of all the forward Medical arrangements, placing the other two Field Ambulances of the Division at my disposal as reinforcements and reserves.

Fortunately in this instance we had time to think out and rehearse in detail all our proposed schemes, with the result that although we lost nearly four thousand men in a heroic and splendid failure, all our duties were carried out without a hitch from start to finish, strictly according to programme, and in such a way as to earn the congratulations of our own Staff as well as of all the Medical Authorities concerned.

We learned much from the work in this battle and care was taken that its lessons were promptly impressed on all ranks, so that they might profit as much as possible from their share in what seemed to us a ghastly massacre. The Officers and men stood the shelling and machine-gun fire like veterans. Only a few were wounded though narrow escapes were frequent, and acts of great coolness and gallantry were numerous, some indeed being specially noted and rewarded.

Shortly after these events we were ordered back to allow the reserve Ambulance to obtain its baptism of fire, and were selected by the Corps Authorities to re-organise and administer their large Rest Station in the town of Merville, which had recent-

ly been giving them much food for thought if not anxiety.

Before referring to that, however, it is convenient at this stage to describe briefly the details of the system of collecting the wounded at Laventie, for there it was simple and straightforward and typical of what was supposed to be going on all along the British front.

The Collection and Evacuation of the Wounded.

The ordinary Trench System was roughly a triple line of defence,

(a) the front line, in which there were sentries and the necessary holding troops by day, and others for attack or defence by night as circumstances required.

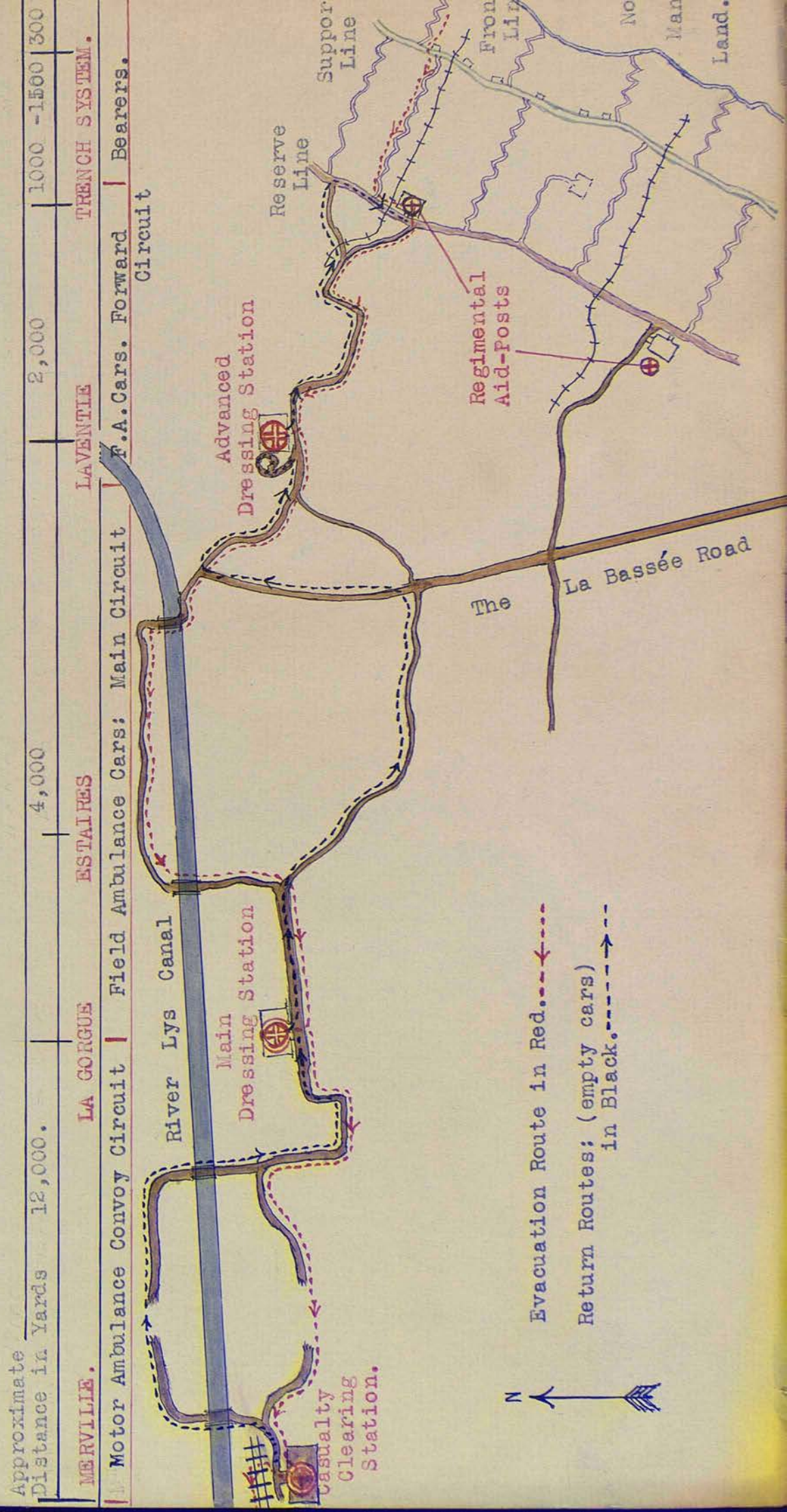
(b) The second or support line, generally when possible provided with shelters and dug-outs in which dwelt sufficient extra troops to stiffen resistance or to repel any hostile attack.

(c) The third or reserve line was further back and in it would usually be found the Head Quarters of the Battalion holding the Sector in question, the reserve Company, and the other liaison and co-ordinating details. Here too, would be the dug-out sheltering the Colonel and the Regimental Medical Officer, with close at hand, the Battalion or Regimental Aid-Post in charge of the Medical Corporal.

COLLECTION OF THE WOUNDED ON THE LAVENTIE FRONT.

Semi-diagrammatic scheme of system.

XIII.



When a man was wounded in the forward trenches he was dressed temporarily and carried down to this place by the Battalion stretcher bearers, and after being seen again by the Regimental M.O. and properly dressed if the fighting permitted, he was handed over to the party of Field Ambulance stretcher bearers attached to the Post, and conveyed by them either by ordinary stretcher or on a wheeled carriage if the roads allowed, back to the Advanced Dressing Station of the Field Ambulance. Sometimes as in this case when the front was quiet and the roads good it was possible to run cars up to the Regimental Aid-Post, to the great relief of the bearers and the increased comfort and well being of the wounded. This of course could rarely be done during heavy fighting but was actually carried out all through our first battle. Advanced Dressing Stations naturally varied enormously in type and character according to their situation, but might be as here a house suitably protected, or a dug-out or a sand-bagged steel shelter, anything in fact which could offer sufficient protection to wounded and staff to ensure that surgical dressing could be done with some reasonable pretence of cleanliness and thoroughness. From here the patient was moved again in one of the Field Ambulance motors to the Main Dressing Station, which might be a Divisional centre or sometimes one serving the needs of a whole Corps.

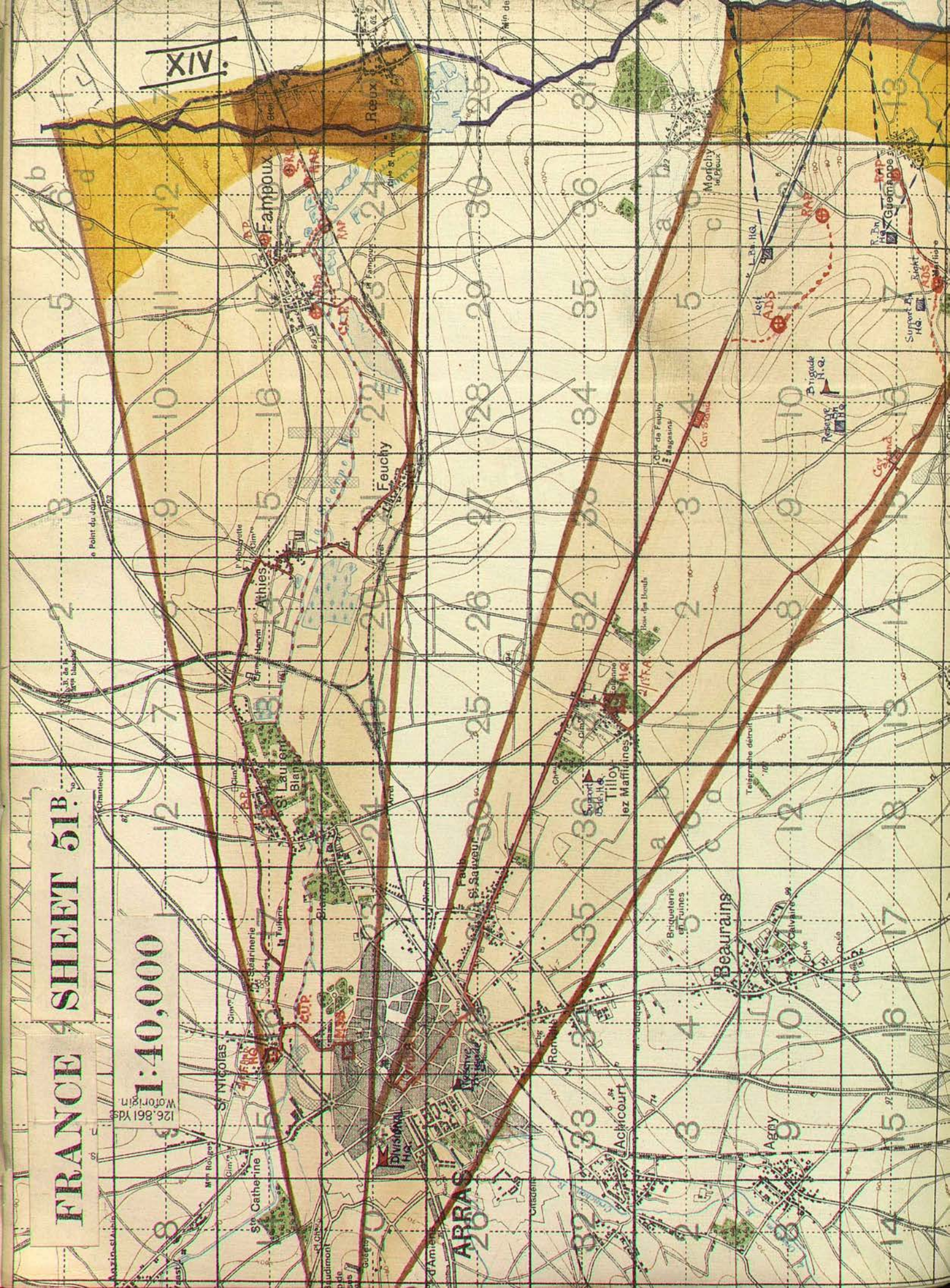
Here in those early days minor surgery was not uncommon and many of the milder cases never went further back, for there was at such a place generally some semblance of a hospital where efficient care was possible and the wounded had a respectable chance of recovery. But if they were too severely damaged for that, they were moved back again in cars belonging to the local Motor Ambulance Convoy, to the Casualty Clearing Station which was generally in the nearest town nine or ten kilometres distant. From there after operation or suitable permanent treatment, they were conveyed down to the General Hospitals at the Base by Ambulance Train. (PLATE XIII.)

It may perhaps make the foregoing description a little more plain if I had a few words in explanation of PLATE XIV. which is attached here. It is a portion of the actual service squared map which we used while in front of Arras in 1917, and it shows in outline and in rough colour two Divisional Sectors (yellow) in which we worked. It also shows the dispositions of the Infantry Brigades in the line, and consequently the areas of duty of their associated Field Ambulances. The area of our Brigade is in both cases coloured brown.

STUDENT LIB.

1:40.000

126.861 Yds
M. origin.



(a) In the northern or upper Sector where the front was active with plenty of fighting going on, there are two Brigades in the line each holding one half of the Divisional Sector, with the third resting in reserve billets in the town of Arras. Our Brigade with two Battalions in the line and one in support, held the southern half of the area, which as will be seen is traversed by the Arras-Douai railway line on a high embankment, and by the Scarpe canal which we used for transporting our less urgent cases back to Arras in a motor barge.

The lettered positions round the village of Fampoux indicate the three Regimental Aid Posts (R.A.P.), a Bearer Post (B.P.), the Advanced Dressing Station (A.D.S.), and the Canal Loading Post (C.L.P.) where the wounded were transferred to the barge. In the back area will be found another Bearer Post (B.P.), our own Head Quarters (H.Q.), the Canal Unloading Post (C.U.P.), and the Main Dressing Station of the Division (M.D.S.) which was in the hands of another Field Ambulance.

(b) The southern Sector illustrates our dispositions on a quiet front with one Brigade in the line and our Field Ambulance responsible therefore for clearing the whole of the Divisional front. Here as before there are two Battalions in the line and one in support, but here owing to the nature of the ground

and the heavy shelling which made cross country work tedious and dangerous, we arranged an Advanced Dressing Station for each side of the front, each one being cleared by cars direct to our Head Quarters by a separate and convenient road. These with the Regimental Aid Posts are again marked by similar lettering and our H.Q. appears among the ruins of Tilloy village where we occupied some good deep German dug-outs. In this case too the Main Divisional Dressing Station is shown in a different part of the town of Arras where as before it was conducted by one of the other Field Ambulances. The Ambulance routes are shown in red, the bearers' tracks by the interrupted lines and the car routes by continuous colouring.

The patients who recovered from their wounds or sickness in the Field Ambulance Hospitals usually spent a few days in a Rest Station before going back to duty, and it was to such a place that we had now been ordered and in which we were for the next three months to expend our energies.

B. The Xlth COROS Rest Station: MERVILLE.

It has already been mentioned that a Division consisted essentially of three Infantry Brigades, which with their associated Artillery Brigades, formed its chief fighting value, but it also of necessity included its own complement of Engineers, its Transport

and Supply Columns, and its Medical and other Auxiliary Services in its numbers. The Division was thus the basic unit in the field, but in each area two or three or more of ~~them~~ were grouped together and administered as a Corps from one central Corps Head Quarters. In the same way several neighbouring Corps were again grouped together to form an Army which in turn controlled its own area and all its associated troops from Army H.Q. Finally all these Corps and Armies were under the direct central control of General Head Quarters where dwelt the Field Marshal, Commanding-in-Chief. From this it will be obvious that if a Division had certain Auxiliary Services of its own, so in turn had Corps and so too had Army, thus the job which we were now sent to tackle was of necessity on a much larger scale than it would have been had it concerned merely one Division, for here we were to be responsible for the welfare and the rapid convalescence of all the exhausted, sick, and slightly wounded men from the whole of the XIth Corps Area, and after we had inspected all the resources available for this purpose we were reluctantly compelled to confess to a feeling of misgiving amounting almost to despair.

As a detailed description and discussion of this Rest Station will be found later on under another heading, it is unnecessary to refer further to it here, and lest this account of our travels and duties if continued in narrative form should reach unwieldy proportions, it is continued now in a sort of

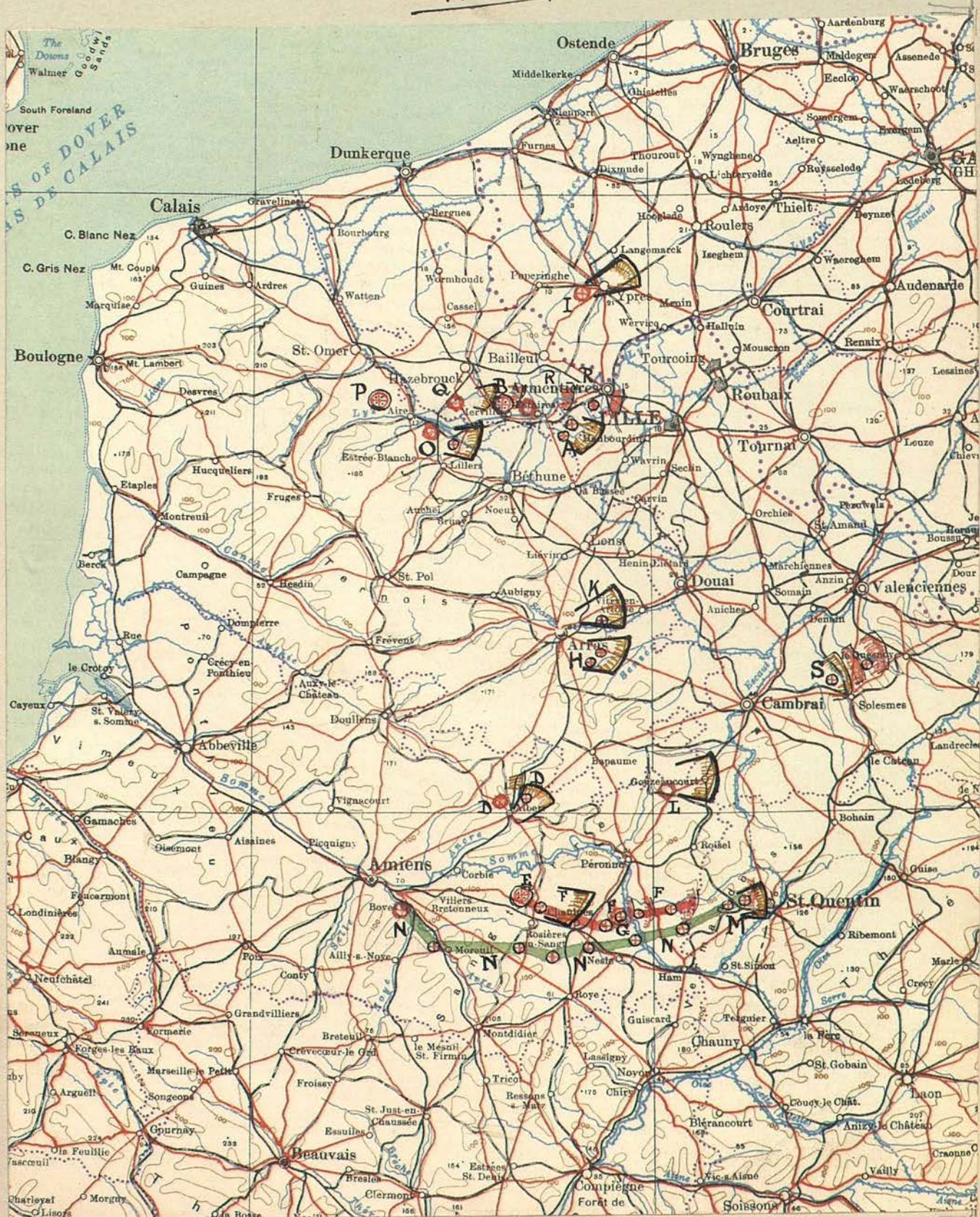
tabulated chronological list which seems amply sufficient to afford an impression of what we were called upon to do, and how each separate duty was carried out.

It may appear now and then rather overloaded with congratulation and self praise, but the fact remains that we did very often succeed where others had failed, and many of the authorities were quite as appreciative of success as they were intolerant of failure. The originals of all the congratulatory messages we received still exist, and can be produced if need be to substantiate my statements and the frequency of my references to them is due solely to my desire to do justice to the work and skill of that devoted band of Officers and Men, whom it was my privilege and good fortune to have the honour to command. And while the record of our work is fairly complete it contains no mention of the marches and treks we had to do in moving from one place to another. The march-discipline and military precision of a Division on active service were expected of us and exacted from us just as from any crack Regiment of Infantry, notwithstanding that we were on duty the whole of the time, busy tending and collecting the maimed, the halt and the stragglers who were left derelict by the way, and that we had always to open some sort of emergency hospital in every village in which we rested, even if the halt were only for one night.

Add to that the care which we had invariably to lavish on the French civilians wherever we went, for they had nearly always been left doctor-less, and seldom failed to take full advantage of our good nature and of our Medical and Surgical resources.

Thus it will be gathered that with the solitary exception of a holiday in July and August 1917, prolonged accidentally by the heavy rains which checked the advance on Passchendael, we were at work continuously whether in the line or out of it, from the day of our arrival in France until long after the Armistice had been signed. It should also be recalled that when in the line, though we did not suffer from continuous rifle and machine-gun fire as did the Infantry, we were shelled almost continuously, and very early got quite accustomed to having our dwellings and premises blown to pieces at frequent intervals, and as quickly recognised that our tours of duty in the line were always incomparably longer than those of the fighting men. They were constantly moving in and out in a series of regular reliefs which in the case of the Field Ambulances would have been so inconvenient that they were found to be impossible. When the Division moved to a new Sector, the Field Ambulance which was to clear the front had to be in position and to make itself familiar with the trenches and the routes of evacuation before the Infantry





FRANCE : Scale 1:1,000,000.

Ambulance Posts of 2/L S. Mid. Fld. A.
 Advanced Dressing Stations;
 Main Dressing Stations;
 Rest Stations;

marched in, and there it remained until the next move was due, the new Medical unit had been in its turn initiated, and the last of our own fighting soldiers had been relieved and had marched away.

Note: In the following table, the numbering letters are the same as those used to indicate on the two guide maps the areas involved. (PLATES XII. and XV.)

SUMMARY OF ITINERARY AND DUTIES IN FRANCE.

A. La Gorgue - Laventie Front: XIth CORPS: May 1916.

Engaged in clearing the Line of wounded.

Extended and entirely rebuilt the Main Dressing Station as well as the other Medical Posts.

Designed and built a special Bath Hut for the treatment of the wounded. Organised and controlled the collection and disposal of all the casualties from the battle of the Aubers Ridge, July 19th-21st, 1916. Assisted in starting and organising all the Divisional Recreations and Canteens.

B. Merville: XIth Corps Rest Station: August 1916.

Re-built and entirely reorganised the Rest Station and the associated Corps Skin Depot. Instituted picnics, sports, concerts, and recreations of all kinds, and put both places on a permanent and business-like footing.

C. Beaumont Hamel: November 1916.

The Stretcher Bearers and their Officers assisted in collecting and clearing the wounded in this series of attacks.

D. The Somme: Aveluy-Poizieres Front:
1Vth CORPS: December 1916.

Engaged in clearing the wounded from right half of the Divisional Front. Designed and built a new Divisional Main Dressing Station and Ambulance Camp with shell-proof dug-outs hewn out of the solid chalk, connected with the camp by a tunnel under the Thiepval road. Built a new Adv. Dressing Station after our first one had been blown up and re-organised the whole of the Ambulance service on this part of the front. Designed a Corps Main Dressing Station on the site of our own M.D.S., but were moved before we had time to build it.

E. The French Somme: Vermandovillers Front:
1Vth CORPS: Feb. 1917.

Designed, opened, and organised a Rest Station and Scabies Depot for the Division, at Guillaucourt.

F. The German Retreat: 1Vth CORPS: March 1917.

Moved forward hurriedly into the line behind the advancing Infantry and accompanied them throughout their advance, collecting their wounded and testing all the wells. Were the first unit to get their motor ambulances through the gap into the new country beyond

G. the German Line. Retired to Bethencourt

and built a large camp, used later as the Corps Skin Hospital. Fitted up a large Bath-house with improvised fixed boilers for the hot baths, and an open-air sun verandah for Impetigo. The stretcher bearers went back to the line when the fighting became severe.

H. ARRAS. South-East Front: Vith CORPS: May 1917.

Engaged in clearing the line on a new front dug by the Division after the battle of Arras. Built all the necessary Medical Posts and organised the service. Heavily shelled with gas, against which special precautions had to be taken and fresh dispositions had to be made. After this we had a Summer Holiday at Frohen-le-Grand with Horse-Shows, Race Meetings and new training, in all of which we took a very active part.

I. YPRES: Walking Wounded Depot:
at Vlamertinghe Mill; August-Sept. 1917.

Re-built and entirely re-organised this large Dressing Station and conducted it all through the second series of attacks on the Passchendael Ridge. Treated and evacuated thousands of wounded, and the place was commonly considered one of the best Stations on the whole of the British Front. First experience here of "Mustard Gas" casualties. Our Stretcher Bearers helped to clear the line, and successfully cleared "No Man's Land" after the second attack.

K. ARRAS: North-East Front; XVllth CORPS:
Gavrelle - Roeux. October - November 1917.

Engaged in collecting wounded from left sector of the Divisional front. A quiet part of the line, but many raids both by day and night. Built a large Ambulance Camp with all accessories and a half-timbered cottage which is still standing and occupied. Re-built all the forward posts. Designed drying rooms for gum-boots, and designed and built baths for the Brigade in the line. The less severely wounded were brought down to Arras by motor barge on the Scarpe Canal.

L. The Gap after the CAMBRAI Battle: 111rd CORPS;
December 1917.

The Division was rushed into the gap in the broken British line after the German counter stroke at Gouzeaucourt. Chaotic disorganisation. All stretcher bearers in the line. Rest of Ambulance opened and organised a Corps Main Dressing Station in the premises of a deserted C.C.S. at Fins, carrying on until the front and the Medical service were once more stabilised.

M. ST. QUENTIN Front: XV111th CORPS;
January - April 1918.

Took over our former line from the French.

Organised a complete Medical system both in the line and behind it, for northern half of the Divisional area. Built three new Dressing Stations, and re-built all the forward posts, establishing emergency 'bombing' casualty posts in all the ruined villages. Re-organised all evacuation routes, and built our own Head Quarters camp, as there was no shelter available.

N. The Retreat of the Vth ARMY. XV111th CORPS;
March - April 1918.

We were the forward Ambulance behind the front of our Division whose resistance was

the pivot which saved the whole of the Vth Army from complete disorganisation. We Retreated with our Infantry after all our forward personnel had been taken prisoner and five out of our seven motor ambulances had been captured or blown up; opening one temporary dressing station after another as we went. Eventually reached Boves near AMIENS, and opened a large Station there, for all the troops who were still left fighting with the French who then came up to relieve us.

0. The Gap left after the PORTUGUESE Retreat:
Xlth CORPS: St. Venant-Robecq Front: April 1918.
-

The Division hastily re-constituted was hurried into the gap behind Merville the day after its capture by the Germans. We were responsible for clearing the line in exceptionally heavy, loose and disorganised fighting. Organised a complete Medical service, built and opened two large dressing stations, gas casualty bath houses, bomb-proof shelters and a large camp. This was considered so sound that we were for the second time selected by the Corps Staff to organise and run their new Rest Station, the former one having been lost in the Retreat.

P. LIGNE. XIth CORPS Rest Station: June-July 1918.

Re-built, extended and entirely altered the place, and made it perhaps the greatest success of our career in France.

Q. Forest of NIEPPE: XIth CORPS: Preparing to Advance: August 1918.

Organised evacuation system from new Divisional front north-west of Merville. Built two large Dressing Stations ready for the coming Advance. Large numbers of casualties from gas shelling required treatment here.

R. The Advance towards LILLE: XIth CORPS: Aug. 1918.

Followed the Infantry in their first two advances towards Lille, clearing their casualties as we went, and building temporary stations on the way. Finally during a halt, built a permanent place which later became the nucleus of a C.C.S.

S. The Final Advance from CAMBRAI. XVIIth CORPS: October - November 1918.

Division moved down towards Cambrai for the final British Advance. We were the only Ambulance forward with the troops and followed them closely right through, using tents and

cottages for the wounded whom we literally and actually cleared out of the firing line in Ford Cars. In this advance we did all the Medical work in three rapid and successful attacks collecting and dressing besides our own wounded, large numbers of sick and wounded German prisoners who increased in proportion every day, until the end of our last fight, which was completed only a few days before the signing of the A R M I S T I C E.

After the Armistice we had a busy time tending the starved, impoverished, and worn out civilians whom the Germans could now no longer prevent from trying to get back to the homes out of which they had long ago been so ruthlessly driven. These wretched people swarmed down the roads and over all the open country near the front in thousands. They were of all sorts and conditions, men, women and children of every age and size, their only common inheritance being their poverty and their misery. The spectacle which they presented can never be forgotten, and to watch as we had to do the progress of this mass of famished and stricken humanity, crushed and well nigh broken under their staggering load of cruelty, indignity and oppression, although even in their final agony, like the rest of their race, still indomitable and unconquered, was indeed enough to have melted a heart

of stone.

We lost no time in opening relief centres and large soup kitchens for which we begged, borrowed, and stole food and supplies of every sort and kind, a quest in which we were assisted whole-heartedly by all the neighbouring military units and authorities of every rank and type. We then established picquet-posts on the main roads and diverted all the empty returning supply and ammunition lorries so that they passed our depots, where with the willing help of the drivers and their friends, we lifted the unfortunate refugees with their carts, their bundles and what of their worldly goods had been left to them by the voracious Hun, bodily into these capacious vehicles and so on towards the several rubbish heaps which were all that now remained, to mark the places where once they had known the joys of 'home'.

Hard on the completion of these duties there followed a move back to the town of Cambrai, where German mines were still now and then demolishing its houses with a discouraging accuracy and suddenness, and here we heard echoes fortunately but faint of the great epidemic of Influenza. Here too we offered to open up whole streets of empty houses and in them where we could at least guarantee shelter and warmth, to nurse as many cases as they would hold, but as this was an innovation, permission was refused with the result that the already over-crowded tented hospitals were swamped, and the weather being vile, pneumonia

and the death rate rose rapidly to alarming proportions. It seemed to us that as the stimulus of the actual fighting had been removed and been replaced by the complacency of Victory, service became slack, and that the boundless energy which had often before been so evident in times of stress was now the exception rather than the rule.

Shortly afterwards our Division was sent back to the French coastal area, there to remain inactive though ready until the Spring when we were gradually drafted where we were most required while the process of Demobilisation went slowly but surely on.

Here our chief duty was the tending of our own sick and of all the French civilians in the large area which we now controlled. My own destiny was to see my Ambulance reduced to cadre strength after which I was given charge of an area as Senior Medical Officer with command of No.2 Stationary Hospital at Abbeville, and from there eventually on August 16th 1919, I was permitted to return home to demobilise only to find that my former position had meantime been permanently filled by another.

From the foregoing account it will be realised that Ambulance work in the field provided the opportunity for a great amount of very versatile activity, and if in the pursuit of our varied duties we plumbed hitherto unknown depths of filth and horror and emotion, at the same time our life was not without its compensations. It is true that the

margin between health and strength on the one hand, and sudden and violent death or hopeless mutilation on the other, was often somewhat narrow and slender; but in the same way so did we often find that the transition from fear to hope, from dismay to cheerfulness and from anxious apprehension to wild and exaggerated hilarity was equally sudden and complete.

Accordingly we considered it well within our province to minister as we might to the cheerfulness of our patients and of those of our friends less fortunately placed than ourselves, more especially when we were running a Rest Station where the less robust among the fighting men were granted a temporary respite from the horrors of their military life and work. We had always cultivated the faculty of entertainment in the unit, and were able early in 1916 to embody those of our number who had any real talent in this direction, in a regular Pierrot troupe which I was able to train in spare moments until they became an asset of untold value to all our patients and neighbours. They were however no professional troupe, for their rehearsals and shows were at once their hobby and their recreation, and it was their boast and ours that many a time they had been fetched out of the trenches straight from their daily and hourly tasks, just in time to wash and take their places on some improvised stage to which they had been as hurriedly rushed in cars. Many a time did

they do yeoman service in helping to take the minds of their fighting comrades away, if only for an hour or two from things we would all gladly have forgotten for ever, and very handsomely was their work and service acknowledged and appreciated by their audiences, from those in high Command to the humblest of the private soldiers who were all equally welcome guests at their entertainments.

III: OUR DRESSING STATIONS IN THE FIELD.

The Field Dressing Stations ~~which~~ we either inherited and used, or designed and built for ourselves in France, were as varied in type as in situation, and it would be impossible and fruitless to describe them all or even to record their names. Their function has already been made apparent and their position, their size, their importance, and the extent of their surgical resources depended for the most part on factors which were beyond our control.

Choice of site rested largely with the fighting Staff, and was decided by their knowledge of the tactical situation or mayhap by their ignorance of it. The character and the extent of our ultimate accommodation was governed chiefly by the friendliness or reasonableness of the Engineers, or perhaps more truly by their lack of vigilance, for though they guarded and that only too zealously the materiel which we always coveted, we generally managed to wangle what we wanted, and failing that to steal it without either shame or hesitation.

Tents, houses wrecked or whole, damaged cottages, steel-shelters suitably fortified, dug-outs, old and disused gun-pits, shacks of every kind, natural caves, cellars, and every conceivable kind of dilapidated hovel

or barn or outhouse, all in their turn served their purpose and were turned to account in some way or other, either by adapting their scope to our needs, or sometimes by adjusting our requirements to their natural and artificially extended possibilities.

The objects which we always had in view, and which we invariably endeavoured to secure were:-

(a) ease and safety in approaching the Dressing Station with the wounded from the line.

(b) some sort of system of reception and evacuation by which the place could be saved from congestion and confusion.

(c) some method of classifying the wounded so that the more serious cases might be dealt with as they came in, and all could be registered, identified and checked by the clerks.

(d) The preservation of order and the development of a system by which the dressings might be done with speed and thoroughness was always of paramount importance; and

(e) some measure of protection was desirable to allow the evacuating cars to be loaded and to move away without being unduly exposed to shell-fire. This feeling of security was necessary, for shelling when heavy and prolonged was apt to defeat any organisation, either by its actual destructiveness or by the unrest and apprehension which its very continuance

could produce even among the steadiest and most hardened veterans. Sometimes any extensive classification of the cases was impracticable but it was always essential to separate them into at least three groups;

(1) Emergencies, as for example Haemorrhage, with a tourniquet on the femoral artery, or profound shock from a perforating abdominal wound requiring immediate operation, would form one lot.

(2) Ordinary stretcher cases would be the second group and

(3) those who though wounded were still able to walk would be the third and generally formed the greater proportion of the whole number.

All these required special arrangements and only by seeing that such segregation was feasible could any dressing station be kept free from dire and most utter confusion. At a later date it became necessary to add to these, other two groups namely,

(4) those suffering from severe burns caused by "Flammenwerfer", and

(5) all the badly gassed patients who required immediate and urgent relief by separate and specialised treatment.

Further, it was important to attempt to secure a steady flow of wounded men into the dressing rooms with another stream going as steadily out of them if

possible without re-crossing their former tracks, and a sufficient service of reliable cars to remove them when dressed for if this were not done nothing could prevent that congestion chaos and paralysis which was our constant dread, and experience quickly showed us the value of providing halting places in the circuit where the stream could temporarily slow down without actually over-flowing its banks.

Again it was most essential that all the wounded except those who would soon require an anaesthetic should be fed, and though this too helped to relieve the pressure it entailed much thought and work and tended to reduce the number of those who would have been available to assist in the dressing rooms.

Order, concentration and a rigid discipline unflinchingly enforced were equally necessary, for relays of fresh Medical Officers and Orderlies had always to be at hand and it was also imperative to keep on sending up fresh bearers with more and ever more fresh stretchers and supplies of all kinds to the line where the actual fighting was going on.

In illustration of the various methods by which we worked and to show how we sometimes succeeded in making these several features actual parts of a sound working organisation, I permit myself to give short descriptions with plans and sketches, of examples of the three principal types of dressing stations for

which

we were responsible during our time in the field, each of those selected having its own characteristic features.

1. Advanced Dressing Stations.

(a) Laventie - May 1916.

A complete house partially protected.

(b) Marteville - March 1918.

Entirely artificial. Well protected,
largely underground in dug-outs.

2. A Walking Wounded Dressing Station.

Vlamertinghe Mill - Ypres Front. Sept. 1917.

Partly tents and partly permanent
buildings.

3. Main Dressing Stations.

(a) La Gorgue - Divisional M.D.S. July 1916.

Partly permanent buildings with a
special bathing hut and other extras.

(b) Aveluy - Divisional M.D.S. Decr. 1916 -
January 1917.

Entirely artificial, Tents and dug-outs.

(c) Fins - IIIrd Corps M.D.S. November 1917.

Temporary adaptation of a deserted C.C.S.
after German break-through at CAMBRAI.

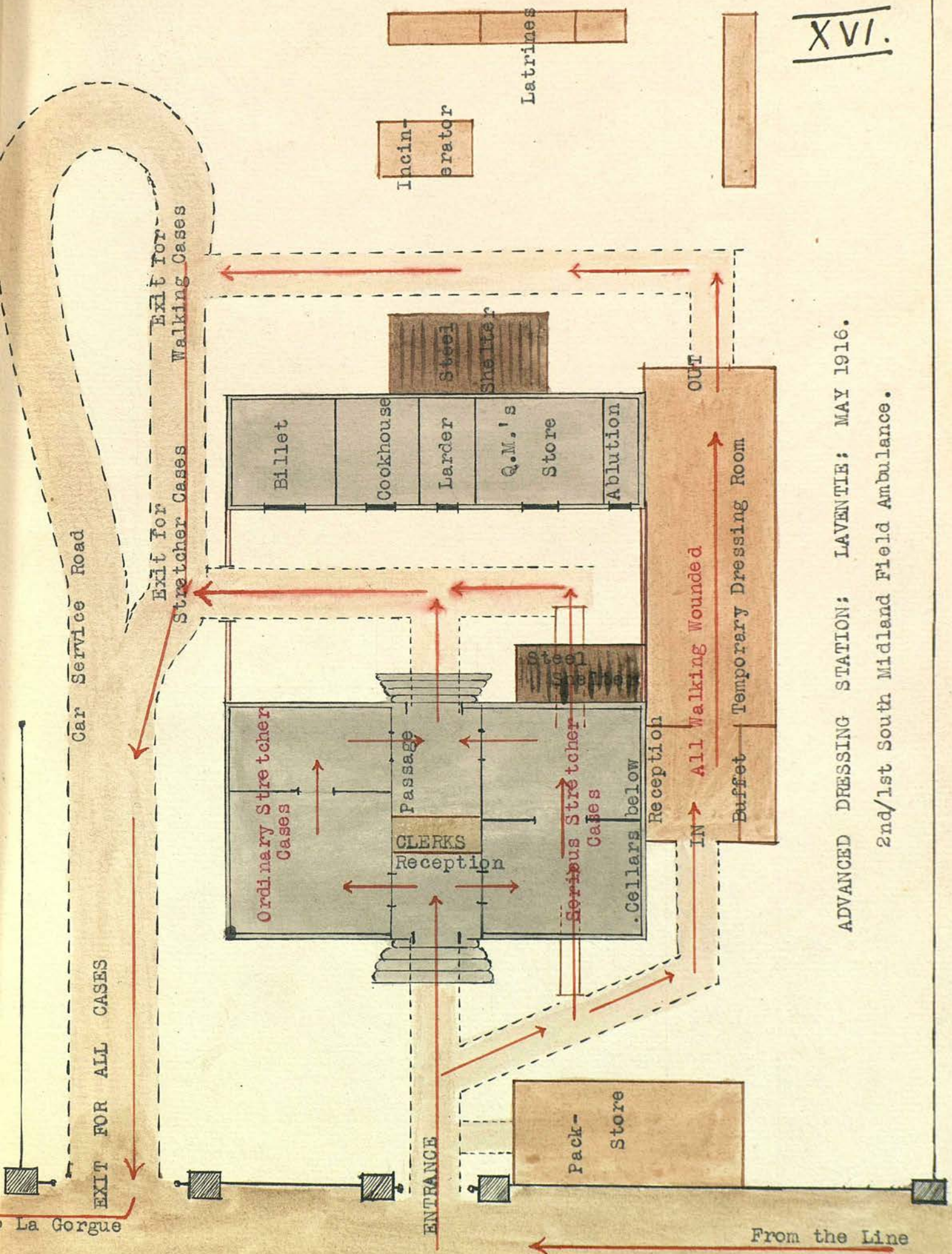
1. Advanced Dressing Stations.

- (a) Laventie.

Here on a stable front with fixed trenches and stationary warfare, the despair of the active soldier, we had a fixity of tenure which allowed us comforts and resources unknown under more transitory conditions. The Advanced Dressing Station was in a large and substantial house which had scarcely ever been shelled and was already ~~into~~ to some extent protected, its strong cellars being so reinforced and fortified that they were safe from any of the projectiles in common use at that date.

The place had been long in use as an A.D.S. and succeeding units had left their improvements for the benefit of their immediate and more remote successors, so that it was in many respects a most useful habitation replete with generous and comfortable accommodation for both patients and staff, but suitable only for the quiet and uneventful form of warfare which was the rule in that Sector. In this there might indeed be many casualties but never the rush which was inevitable when fighting became active or severe, when their numbers were always calculated to test to their utmost capacity the limits of any Dressing Station.

Thus though we found it ample for all our routine work we quickly saw how useless it would be in a battle of any size. We therefore curtailed the personal comfort of the staff and used the rooms thus



ADVANCED DRESSING STATION: LAVENTIE: MAY 1916.

2nd/1st South Midland Field Ambulance.

Casualty Route in Red.

Permanent Buildings in Grey.
Temporary structures in Brown.

liberated as extra dressing rooms. We also erected a long lean-to shed along one whole side of the house and yard, so that we could now classify and separate our wounded into ordinary and serious stretcher cases, and keep the walking cases by themselves.

The house and surroundings are shown on the plan (PLATE XVI.) and it will be seen that the arrangements have at least the merit of simplicity. The central passage is blocked by the clerks' office which serves also to divert the two classes of stretcher cases one to the right suite of dressing rooms, and the other to the left, both groups after treatment re-joining at a common exit in the courtyard, where they could be loaded on to their appointed cars for evacuation. The Walking cases were sent round to the shed at the side of the house where they found their own clerks' office and their own buffet through which they passed to their dressing room and thence out round the back of the house to another fixed point on an artificial road, where they too found such conveyances as were available to take them down to the M.D.S. at La Gorgue.

Little need be added for the details are self-evident on the plan, but besides these three routes for the wounded we still had a fourth via the cellars under the eastern rooms, to which access was gained by a sloping ramp should the shelling have made

this precaution necessary. Here protected among concrete walls, timber props, and sandbagged shelters we could work in safety with plenty of room for storing the patients until a lull would make their evacuation up a similar inclined plane into the courtyard possible and safe.

(b) Marteville.

From Laventie in May 1916, to Marteville near St Quentin in March 1918, seems perhaps to some of us a longer interval than its measure in actual months, and a far greater distance than any peace time map can tell. Much indeed had happened in that fateful period. Many dressing stations had been built and abandoned, and there is little resemblance between the one now to be described, and the last in which we had so keenly busied ourselves in our early days in France. By this time the shelling of back areas was as constant as our daily bread, and the hated droning of the night-bombing aircraft effectively dissipated that sense of temporary respite which before we had been wont to associate with the hours of darkness.

Few buildings now attracted anyone for most of them were but lonely targets awaiting their final demolition and in this part anyhow there were almost none, for this was the country from which the Germans had been driven early in 1917 in their great retreat to the Hindenburg Line, a land which they had devastated

FRANCE

THE SOMME COUNTRY : 1917 - 18.

Scale - 1 : 250,000.

61st Division's Sector ; March 1918 ; YELLOW.
2nd/1st South Midland Field Ambulance's ; BROWN.

RETREAT OF THE Vth ARMY

Our Dressing Stations shown in RED.
Route shown in GREEN.



with that barbaric and ruthless completeness which so abundantly justified both their more common appellations.

Here too our medical arrangements required a lot of thought and attention for we belonged to the centre Division of the ill-fated Vth Army, and our advisers early recognised that if we with only our sketchy forces on a long and thinly held front, were to bear the brunt of a frenzied attack by the enemy, we should most inevitably be compelled to give ground at the outset, though of course, that we would be overwhelmed as we eventually were, was not by any means anticipated.

With this end in view we soon abandoned the French Medical system for though it had been well designed and still better executed for them by their Engineers, it was suited only for that peace-time warfare which was their usual habit between great battles, and it would in consequence have proved useless to us either in our more active form of trench fighting or in that crisis which was to be our Ultimate fate.

We took over the St. Quentin line from the French in January 1918 and at once began its re-organisation. We extended one of their posts at the eastern end of Maissemy village to form an A.D.S. and finding that it attracted a good deal of promiscuous shell-fire, we duplicated its accommodation in another place at the western of the ruined street where our forward motor ambulances waited, so that all our eggs might not rest in one precarious basket.

Behind these two posts both of which though small were practical and built to our usual pattern, we developed a chain of emergency aid-posts, one on the site of each of the ruined villages in the area, and all designed to be capable of rapid extension.

Further back at our own Head Quarters at Lanchy we constructed a large and commodious camp which with its baths, huts, tents and dug-outs, and the roomy cellars of a ruined chateau would, we thought, be sufficient to cope with all the casualties we were likely to receive even in the stress of the formidable battle which we all felt quite certain was impending.

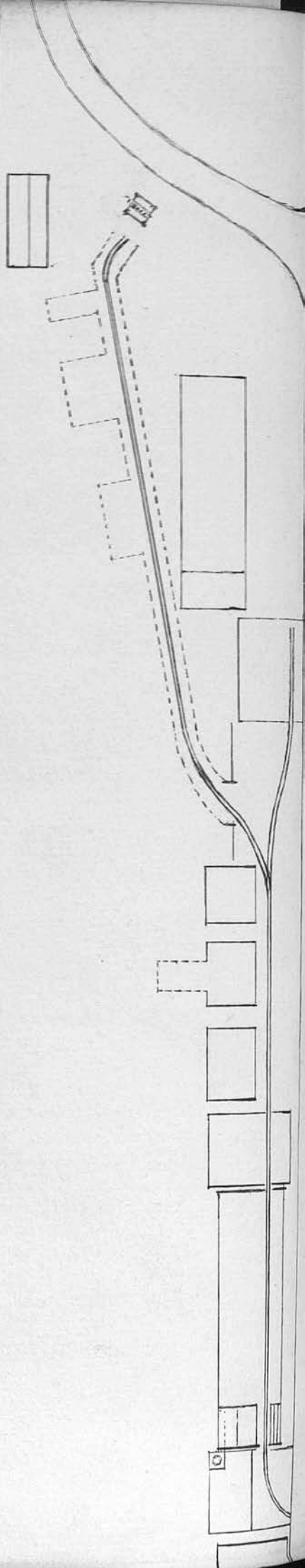
But after these elaborate and extensive preparations had been completed, the Medical Authorities, very wisely if somewhat late in the day, advised an alteration in the old scheme of A.D.S. and M.D.S., substituting in their stead one general dressing station for each Sector, its distance from and its relation to the front being left unspecified.

This place was to be further forward than the average Main Dressing Station and yet not so close to the fighting zone as the usual Advanced Dressing Station and we were ordered to get ours ready at once. Marteville was the spot we selected for it and it was begun forthwith, though we saw that it would be necessary here to sacrifice some of our customary details of design and system owing to the urgent and imminent dangers of the moment.

Convenience, ease of access and protection for both wounded and staff were here all important, but speed of construction was even more so, and therefore these became the determining factors in our plan. We had already re-built a ruined house close by in which to hold the local sick parades, and here too we had established a motor ambulance depot and petrol store with a stout wooden hut for the drivers and a hard standing for their cars. The main road had a high bank on its German side and we decided to dig into this for protection and to burrow under the rising ground in front of it to get some decent dug-out accommodation as quickly and as easily as possible.

The dressing station consisted of a long steel shelter of the usual type erected in sections and built well in underneath the bank being afterwards covered with boulders, logs and tree-trunks and finally the chalk from the excavation, and through its whole length we ran a light railway line for which trolleys were made by our own carpenters. At the entrance we had as usual a well stocked buffet and the clerks' office and all along one side were dressing tables or racks for the stretchers so that a large number of cases could be dressed at the same time, and with our system of "dirty orderlies" preparing the patients and clean orderlies" always ready to do the actual dressings, there was little waste of time and we hoped that evacuation would be able to keep pace with the

XVIII.



admission rate even during times of the greatest pressure.

For the more seriously wounded who required more leisurely and more careful handling and indeed for all when the shells came too close, we had the underground tunnel shown in the plan (PLATE XVIII). This also had its line of rails and was, like the steel shelter lit by acetylene gas from a plant manufactured by ourselves. Off this tunnel opened two dug-out dressing rooms twenty feet below the unbroken surface of the ground, the whole place having been excavated by our own men, and very useful did it prove before the battle was over. From the upper end of the tunnel which was eighty yards long we had an alternative sloping exit through which patients could be evacuated, should the lower end by any chance be blown in.

The additional structures shown in the sketch served the purposes of Quarters Master's stores, cook-house, blanket and stretcher stores, and equipment store, and the large building in the distance was a huge wooden hut built for the Y.M.C.A. people.

This hut was opened for use on the 20th of March and was annexed by me the following morning after our "gas and walking wounded" hut, further along the road had been blown up, but it like the rest of our premises was hurriedly vacated shortly after mid-day on the 22nd, when we were forced to flee from the temporarily

victorious Huns who had just succeeded in capturing the village.

This short sketch will serve to provide, in contrast to the last, an entirely different view of Field Ambulance work and I hope that the reader will appreciate the enormous amount and variety of the labour and resource involved in the hurried construction of such a place, carried out as it was, without one word of advice or one atom of assistance from any of the specialist branches who really ought to have relieved us altogether of all such anxieties and efforts. Its construction was considered rather a remarkable achievement by the Divisional and Corps Authorities and would have been inspected by the Army Commander had time and the enemy permitted. That it was of untold value to those of the wounded who were not captured in the great German attack of March 21st and 22nd can of course be fully appreciated only by those who happened to be there.

2. A Walking Wounded Dressing Station.

Vlamertinghe Mill near Ypres.

In July 1917, our Division which had been fighting almost continuously since the previous November, was given a rest and sent back to train and refit for the great series of attacks that were to give us the ridges of Passchendael, from which it

was hoped we would be able to command and recover a large area of northern Belgium. The first attack unfortunately failed, solely on the account of the unheard of rain, which made any advance through the Flanders mud an impossibility. For the second great attack we were first reserve Division and consequently we moved towards Ypres in August, sending our Nursing personnel on ahead, to the Walking Wounded Depot of the **XLXth** Corps at Vlamertinghe Mill to assist the Irishmen who were then in possession. We succeeded them on August 20th when I was ordered to take over the command and to get ready for another huge offensive which was imminent, and having seen the place under full pressure of work a few days before during the Irish attack, it was my good fortune to be able to estimate both its weaknesses and its possibilities before my own responsibilities began.

Our stretcher bearers were already forward in the trench zone under another C.O. but I was given some extra help from other Divisions in the Corps, and was informed that my staff of doctors would be increased to sixteen or seventeen when the fighting recommenced. Thus I was able to decide on the alterations which seemed to be necessary and also to get them carried into effect, somewhat roughly it is true, but still effectually, by making all hands work continuously day and night for the whole of the thirty-six hours that had still to elapse before our first battle began.

The D.D.M.S. had indeed approved the scheme but regretted it could not possibly be completed in the time at our disposal, and therefore when he arrived on the morning of the attack just after the barrage had opened, he was good enough to express both his amazement at the speed with which the changes had been effected, and his delight with the excellence and convenience of the resulting arrangements.

The place was a large and commodious farm with excellent facilities in its out-buildings, among which as a sort of central pivot there stood the large and strongly built tower of a dismantled wind-mill, which provided in its base splendid accommodation for our administrative services, as well as decently substantial housing for both the Officers and the other personnel.

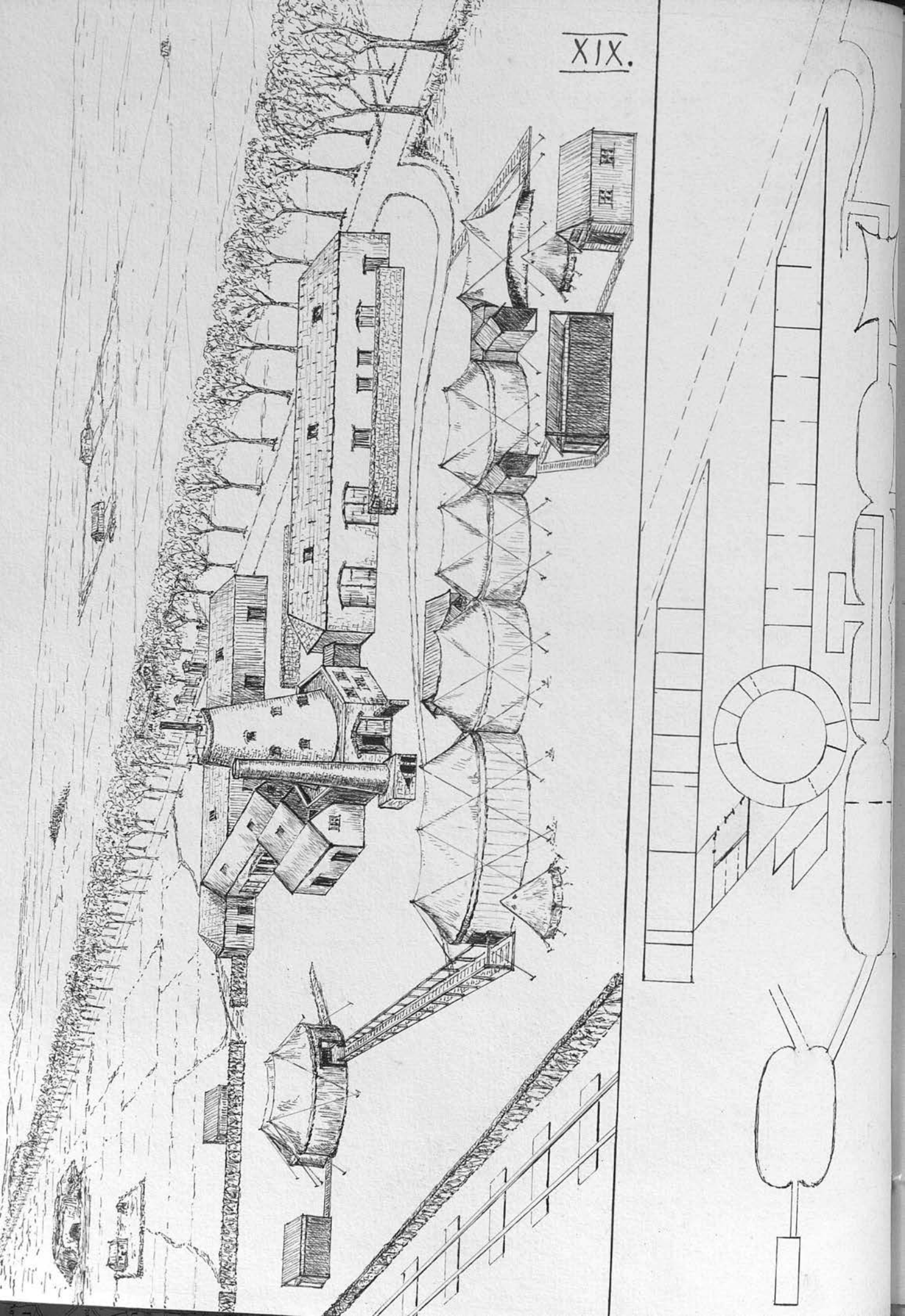
The arrangements made by the Staff of the XLXth Corps for the conveyance back to us of their Walking Wounded were admirable. Motor lorries and trains brought them down close to the mill by three separate routes, and one potent cause of failure in the system of our predecessors had been, that each of these three streams had entered the dressing station by a different route. This we accordingly stopped at once, and by a rapid and simple rearrangement of paths and barriers we forced them all, with little extra trouble to themselves and to our greatly enhanced comfort, to converge towards our one and only main entrance.

From there the inevitable journey through the depot was made as plain and simple as possible and it is indicated clearly on the plan, the attached sketch giving a fair impression of what the place looked like when it was ready for the work to begin in earnest.

(PLATE XIX.)

We had never before tackled the treatment and disposal of walking wounded as a special and exclusive branch, but we knew that they presented problems of their own, and these we had tried to understand and solve in advance. One great difficulty was their independence and enterprise for they were mostly able to move about by themselves, and as a rule they arrived in such crowds that unless they were marshalled and controlled with the utmost tact and firmness, they not only strayed and got lost, but they could unwittingly cause the most hopeless chaos and confusion in any dressing station ever devised. It was to obviate this that we kept them going in a continuous circular stream from which there was no escape, and that we provided in its course several places where in case of any delay the procession could temporarily broaden out and wait, without causing any confusion in the place or any discomfort to the wounded.

Close to the entrance was the Salvage Tent under a special staff and here the arms and accoutrements were collected from all the men so badly



wounded that there was no chance of their going immediately back to duty. This material was arranged in classified heaps and sent to Corps Ordnance twice a day in lorries. Next the wounded passed into the first Rest Tent where there was a capable and experienced N.C.O. who with stretchers and restoratives at hand was able to spot and assist any patient who should really have been brought down on a stretcher. This was a very necessary precaution because although there may occasionally have been a man who came down with a wound so slight that he might have carried on, far more often did men arrive at our dressing stations walking, with wounds so horrible and serious that the marvel was they had ever been able even to stand after being hit.

Beyond the Rest Tent was the Buffet built on roomy and substantial lines in two joined marquees, with a fixed counter running the full length of both. This was made of heavy timber driven into the ground so that fifty men if they chose might safely lean against it at once, and here over a hundred could be fed at one time in comfort. Round the sides of the tents were stout benches also fixed firmly in the ground with sloping tilted backs where another rest was possible and where many of the more weary fell fast asleep. From these tents too, all had access to urinals and latrines, and from the far end of the Buffet they passed on into the Chaplains' Compound which was a small part of another large marquee borrowed from the

Y.M.C.A. and in it the Padres on duty had every facility for writing post-cards and letters for the men, and for helping them in so many of those ways in which only a decent Padre could. The other and larger part of this tent was fitted up as the Anti-Tetanic Serum Department where a large staff was constantly occupied injecting every man as he passed through.

Leading out of this was a railed duck-board track which brought the stream in to a large shelter made of laced tents and as this too was fitted out with rugs, deck-chairs, and benches and had an outlet to a second set of sanitary conveniences, it was useful as another relief place during any temporary congestion. Here too the way was pointed out by a short duck-board track which guided them all to the Clerks' Office, a veritable work of art and the cause of much merriment for it looked exactly like the doors of a picture house. It was divided into three sections labelled for the different Divisions in the Corps, and in each a reliable and speedy set of experienced clerks were continuously at work for through these three channels walked a never ending chain of wounded men from day's beginning to day's end.

All three Offices opened into the Sorting Room where each case was carefully examined by the doctors on duty there. This was one of the busiest and most

Plan of

WALKING WOUNDED DRESSING STATION

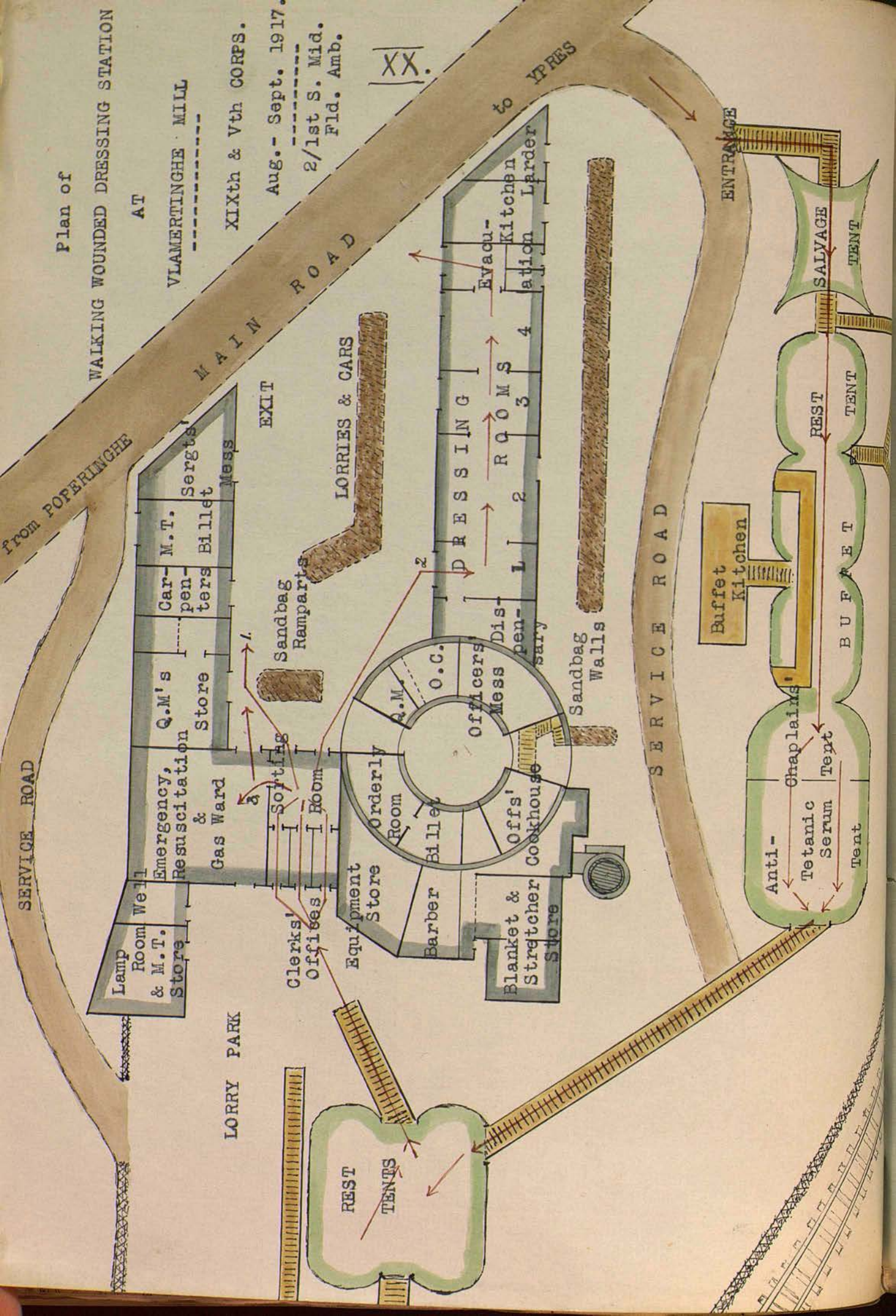
AT

VLAMERTINGHE MILL

XIXth & Vth CORPS.

Aug. - Sept. 1917.

2/1st S. Mid.
Fld. Amb.



SERVICE ROAD

from POPERINGHE

LORRY PARK

EXIT

LORRIES & CARS

to YPRES

ENTRANCE

SERVICE ROAD

Buffet
Kitchen

BUFFET

REST

TENT

SALVAGE

TENT

Chaplain's

Tent

Anti-Tetanic
Serum

Tent

REST
TENTS

Blanket &
Stretcher
Store

Offs'
Cookhouse

Orderly
Room

Barber

Billet

Equipment
Store

Clerks'
Offices

Room

Softing

Sandbag
Ramparts

Mess

Sergts.
Billet

Car-pen-ters

M.T.

Store

Q.M.'s

Emergency,
Resuscitation
& Gas Ward

Lamp Room
& M.T. Store

Well

important parts of the whole place, for here was decided and that promptly, the disposal of every patient. There were three courses possible and each one had its own appropriate exit from the room so that mistakes were practically impossible. (PLATE XX.)

1. The man was in good condition and his wound not very bad. It had been efficiently dressed further forward and did not require anything else at the moment. He had been relieved of his kit, fed, rested, parsoned, had his A.T.S. and been clerked and received his Field Medical Card, so he was ready for the C.C.S. Out therefore he went by the middle door, up a small wooden stairway and stepped into the motor lorry which was always waiting, took his seat, and was off down the road as soon as the load was complete.
2. His wound was not properly dressed. Then the right hand door was his and it passed straight to the series of dressing rooms where he would receive the best attention we could give him.
3. He was beginning to feel bad, maybe gassed or faint or merely weary and tired out, or perhaps collapsing from shock or loss of blood. For him the door on the left was opened and out he was carried on a stretcher into the emergency and resuscitation ward where all suitable treatment was available, and from which he

would be evacuated later in the day as a stretcher case.

The dressing rooms were arranged to work together or independently as required and beyond them there was a large room for the cases awaiting evacuation, in which we had a complete series of tally boards with a nail for every unit in the Corps on which the dispatching Sergeant hung in order all the A.F.'s 3210, so that at any moment the H.Q. staff of any unit or formation could tell the numbers and indeed the names of all its personnel who had passed through our hands.

This completed the circuit of the wounded which is all that concerns us at present, though a glance at the plan will show that other details which were equally necessary were not forgotten, and many incidents might be narrated to illustrate the value and the convenience of the place as a working organisation. It is enough to say that it worked like a well-oiled clock and though tested by constantly succeeding crowds of wounded for days and nights on end not once did it fail to accommodate them all in comfort, and it excited the admiration which was most warmly expressed, of all those authorities most concerned, whose opinions we most highly valued.

Main Dressing Stations.

It is possible that the mere enumeration of the succession of ambulance posts from front to base

may have suggested that in some cases by their very frequency, wound dressing might easily be overdone, and so indeed it sometimes was when fighting was slack and casualties few in number. A slight wound when it had been cleansed and covered with a clean 'first field dressing' might quite well have received all the attention that was really necessary, and therefore it was worse than useless to redress the man at the Regimental Aid-Post, again at the Advanced Dressing Station and once more at the Main Dressing Station, where in any case he would be within measurable distance of his first resting place, the C.C.S., on his laborious journey to the Base. On the other hand it is well known that many a man arrived in England in times of stress, with nothing to show for all the Red Cross organisation in France except a very dubious dressing tied over his wound by a friend who had chance to be at hand when he was hit. These are of course the extremes and somewhere between them lie truth and custom.

That there were grave defects in the R.A.M.C. organisation in the field is well known and our criticism of some of them will be found later, but gradually as experience was gained the system in time evolved itself, and those of us who were nearest the front soon learned the value of co-operation and its natural results which were mutual help and mutual

relief, both undertaken as a rule we trust, with a prudent and discerning discrimination.

The advent of the motor ambulance, though apparently unknown to the authorities in (1914 (!), had limited the usefulness of the Divisional Main Dressing Station by bringing the Casualty Clearing Station so much nearer, but still in places like La Gorgue in 1916, it played a definite part as has already been explained. There at that date our resources and facilities were such that our Head Quarters were very nearly as permanent in character and comfort as any C.C.S. and we were therefore allowed and encouraged to retain right through to convalescence as many of the slighter cases as we had room for; and naturally we early tried to see how we could improve their treatment, increase their comfort and hasten their recovery.

In this pursuit we very soon became convinced of the futility and general unsoundness of merely carrying out the partial and imperfect early treatment then commonly approved, for it seemed to us the very negation of common sense to regard as in any way adequate or satisfactory, a practice which was content to swab out a foul wound with some mild antiseptic and then having washed or stained with Iodine a few surrounding inches of filthy skin, to apply over it an ordinary dressing and send the patient on to hospital.

The two main obstacles to early recovery were obviously dirt and shock, and we thought that the severity of both would be more easily diminished the earlier they both received thorough and adequate treatment.

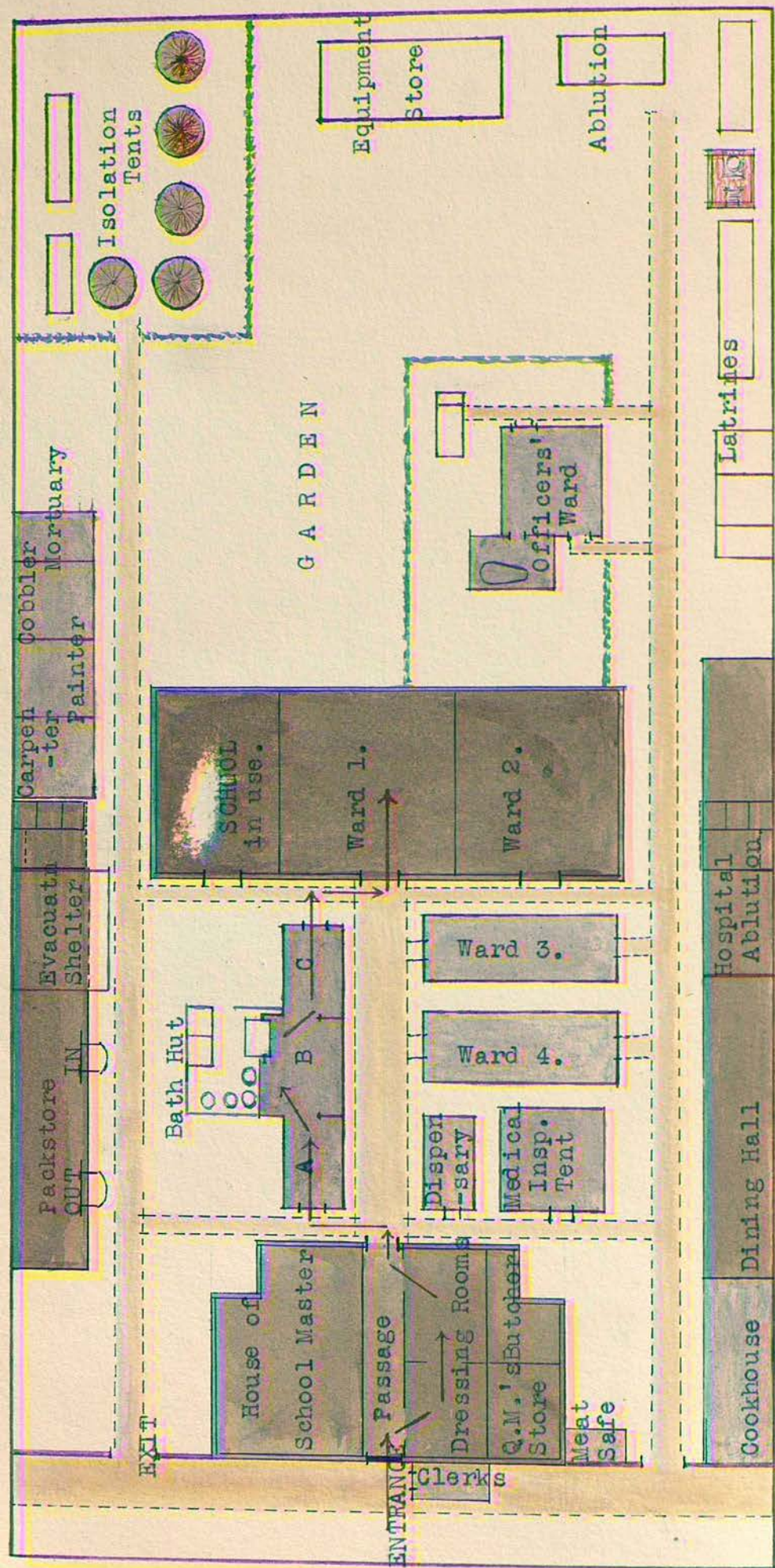
It is true that it was not generally a long journey from the average M.D.S. to its associated C.C.S. but the length of the road was but a very imperfect index of the actual time that might elapse before the serious treatment of any ordinary case was taken in hand, and meanwhile, there lay the unfortunate patient with a large open wound stiff with cold, his body swathed in its filthy clothes, covered with lice, and nearly always soaked to the skin with the horrible liquid mud which was his natural habitat in most systems of trenches. This it was which induced us to build our bath-hut which was the distinguishing feature of our Main Dressing Station at La Gorgue.

(a) La Gorgue.

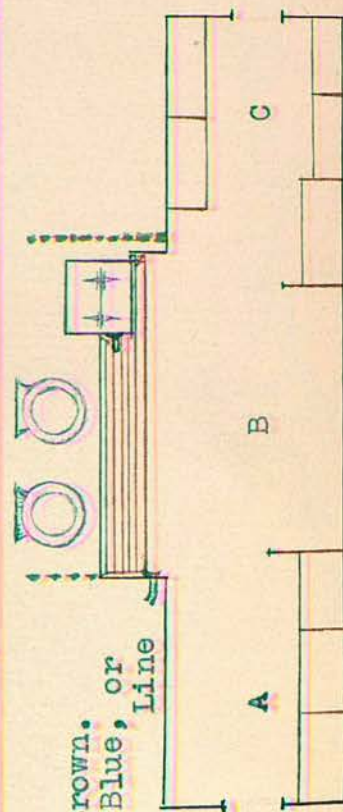
The greater part of this place does not call for much intimate description. We were housed in the local day-school, of which two large class rooms made good wards, and we used part of the Master's house as our reception and dressing rooms, the other ancillary services being provided for by various temporary structures of the usual kind arranged as shown in the plan. (PLATE XXI.)

The majority of the cases which arrived here from the forward area required no treatment at all, as they had already been dealt with at the A.D.S. at Laventie, where we enjoyed facilities sufficient as has been seen, to allow really satisfactory dressing to be done. Nor did we delay the progress of the seriously wounded. They were merely checked by the clerks without being removed from the cars which brought them down and were sent on at once, other cars being sent forward to take the place of those unduly delayed by the longer journey to the C.C.S. This practice which seemed to us most reasonable and business-like, and more comfortable for the wounded, was unfortunately contrary to the regulations and was therefore unpopular, but as we refused to alter it nothing could be done, and in time even the letters on the subject ceased.

The patients who were to be retained were usually selected provisionally at the A.D.S. when their wounds were being dressed, and their treatment was therefore left for us to complete. On their arrival at La Gorgue they were carried into the Reception Room followed by the clerk on duty, who performed his allotted ritual while they were being prepared for the Surgeon. This over, the patient was pushed along the dressing bench, which extended into the adjoining dressing room where a detailed examination was made and his disposal definitely settled. If it was then decided to send him on, he was dressed and



Permanent Buildings in Brown.
Temporary Structures in Blue, or
Line



Enlarged Plan of Bath Hut.

carried out through the yard to the Evacuation Shelter, where a special staff eventually transferred him by the common exit to one of the Motor Ambulance Convoy cars which plied regularly back to the C.C.S.

If he were to be retained, he was carried straight to the Bath-Hut in the first part of which "A", he was stripped naked, his few personal effects being checked and enclosed in a small linen bag which followed him till his discharge. This done, he was moved on to the waterproof covered stretcher on the washing rack in "B", and there given a thoroughly searching hot bath with plenty of soap and hot water a process of general cleansing in which his wounds very often shared with the greatest possible benefit. After this his wounds were washed out carefully and thoroughly with sterilised saline solution slightly hypertonic, and dressed with plain sterilised gauze and he was passed on into "C" where he was gently and carefully dried with hot clean towels and where, wrapped in clean and thoroughly hot blankets, he was laid on a clean stretcher which was then transferred to its appropriate trestles in one of the wards. There he was filled up with good hot soup or whatever was available, or what he, within limits, preferred and immediately after that he went off into a deep sleep which lasted generally from twenty-four to forty-eight

hours during which he was roused and that as a rule only with great difficulty for further meals.

When this process was carried out as it often was, within two or three hours of the time the men were hit, the results were simply astonishing. They awoke free from shock and in a great many cases free also from pain, refreshed to a degree that they themselves could scarcely credit, and in many the healing of their wounds proceeded at a pace so incredible that most of them were convalescent before they realised they had been ill.

But there were of course a good many administrative difficulties encountered, especially as this was a new method and was in consequence looked at askance by most of the local Medical Authorities. The ultimate good was as usual disregarded, and we were adversely criticised for taking away the man's khaki clothing and equipment, chiefly because of the ancient and traditional military medical fetish that a wounded soldier must never be parted from the rifle and other things which differentiated him from the mere civilian. This was of course to us merely an unmeaning and anachronistic survival of a bygone era, and it is significant that what we insisted on doing in the face of continued opposition in 1916, became the usual practice in the later stages of the war when its magnitude and the severity of the wounds

must at last have convinced someone of the vanity of regulations framed in all probability to meet the conditions which prevailed in the days of Agincourt or even of Waterloo!

We were severely handicapped too, by a lack of towels and pyjamas and by the poverty of the laundry facilities available. The former we solved by the generosity and never failing kindness of the British Red Cross Society without whom the whole Medical Service in the field would often have been absolutely bankrupt, and the laundry work 'faute de mieux' we had to do ourselves though in this as in the other things to which we set our hands we attained some considerable success.

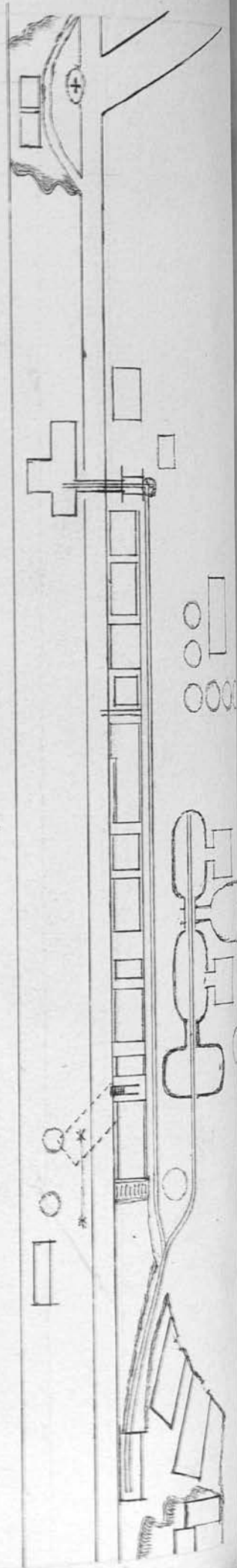
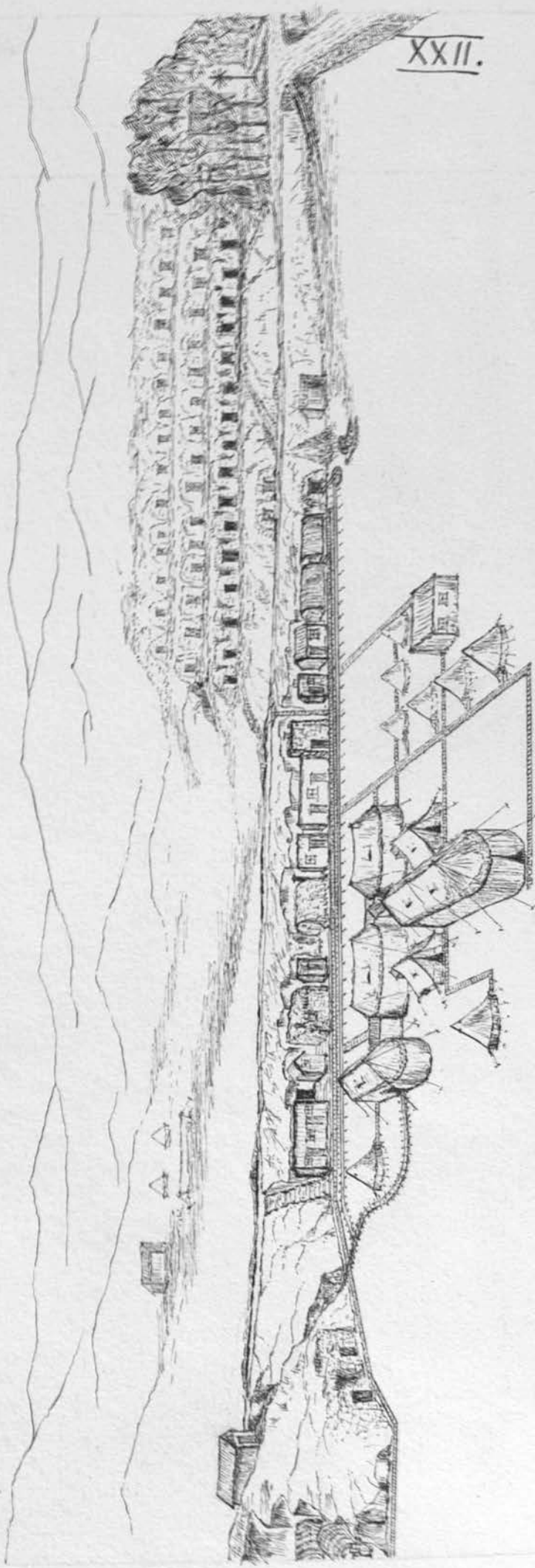
At La Gorgue, however, as in most of our original efforts we enjoyed the generous and constant support of the senior fighting soldiers, and were especially heartened by a visit from General Sir Charles Monro, at that time Commanding the First Army, of which we then formed part. He inspected the Bath-Hut with great interest and told us to go ahead with our work in it, as it was easily the most sensible R.A.M.C. scheme he had seen since coming out to France.

(b) Aveluy.

The decimation of the Infantry of our Division at Laventie in July 1916 was serious enough to prevent our being thrust into the Cauldron of the Battle of the Somme even in its later stages. The Stretcher bearers were all however employed at Beaumont Hamel in November, and after that the whole Division moved into the line in front of Thiepval and Pozzières, and there experienced the aftermath of the terrific fighting of the Summer and Autumn.

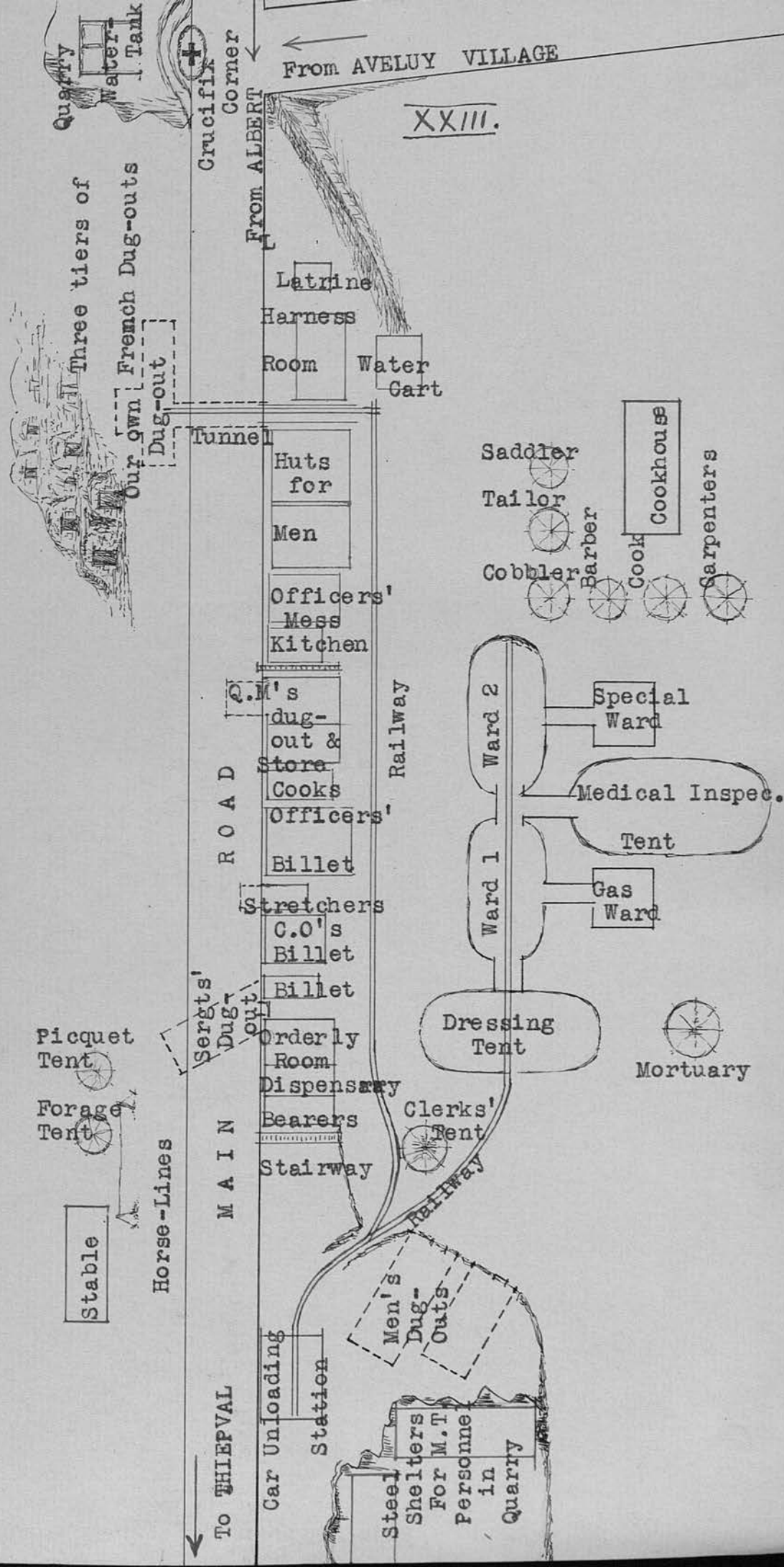
The life in this area was quite sufficiently exciting for even the most ardent spirits and our work was both hard and constant. There were few medical arrangements of any but the most flimsy and temporary description, and while the bearers were existing as best they might in a loathsome desert of muddy and putrescent shell-holes, the rest of us having no Head Quarters at all carried on to the best of our ability in bell tents pitched on the all-pervading mud just outside the town of Albert.

Before long however, the severity of the weather, the ruinous condition of even the main roads, the promiscuous shelling of the back areas, and the difficulty of intercommunication, compelled us to organise a Divisional Main Dressing Station of some kind, and therefore we got orders to move to "Aveluy Post" and see what we could do there. This place on inspection proved to be merely



A V E L U Y P O S T

2nd/1st South Midland Field Ambulance: December, 1916.



a discarded site, boasting only one decrepit marquee and two equally decayed dug-outs inhabited by rats, at the edge of the mud-flat which was the limit of the bed of the River Ancre close to Aveluy. But here after a period of intensive and concentrated labour we developed a M.D.S. which became our home and Hospital for nine long and unspeakably trying weeks.

The shelling of the river bed was constant and fairly accurate so we tucked most of our dwellings, such as they were, well in under the shelter of the bank, below the Albert - Thiepval main road, and quickly sought more complete safety and protection by burrowing into the chalk hill behind us. This had already been freely excavated by the French who had made there a triple series of dug-outs near the road fork known as "Crucifix Corner", and in these now dwelt the Administrative details of our Infantry Brigades holding the line.

The only available cover for our hospital was tents for unfortunately a boat load of Nissen huts, a recent popular and most convenient invention, had fallen to the Huns' torpedoes, and the supply was in consequence hopelessly unequal to the demand. But gradually our accommodation grew and the attached sketch and plan (PLATES XXII. + XXIII.) give a very faithful representation of the ultimate nature and extent of our encampment.

One pressing problem was to ensure the safe descent of the wounded from the main road on which

they reached us in cars to the camp level about fifteen feet below, a defective and muddy stairway being in the hours of darkness, a very precarious and uncertain route. This we solved by the construction of a light railway with a covered-in unloading station on the road, and suitable ambulance trucks made by our own carpenters from the frames of tip-trucks stolen from a neighbouring railway dump, and on these all our patients were brought down into the dressing tent. This was fitted with a large central stove close to the line which was continued right through the hospital, and thus as most of the cases were dressed on the trolleys, they were saved much movement and discomfort. They were afterwards wheeled either back to the evacuating cars, or on to the dug-outs if that were necessary until a lull in the shelling would permit them to be taken away in safety.

Here as elsewhere our buildings were as diverse as the circumstances which called them into being and a glance at the sketch will show their extent which scarcely calls for any further comment. We renovated several old dug-outs and completed and fitted one of five chambers by our own unaided efforts, and eventually connected it to the camp by a well timbered tunnel under the road with a light railway running through. By this means we could effect a rapid transfer of all the wounded from the tents to safety when the shells came unpleasantly close. We also put up steel shelters for our Officers and motor-transport men in

the adjacent quarry, and arranged horse lines, harness-rooms, cookhouses, stores, offices, tents for gassed cases, and all the usual adjuncts of any similar place.

Thus rapidly the camp became an attractive and well-ordered centre. Duck-board paths led to all its different parts, and they and the ubiquitous tram-lines were firmly ballasted with the stones and chalk hewn from the dug-outs. All the tents were connected by short covered corridors made of canvas and tarpaulin, so that it was possible to walk through its whole extent not only dry shod but also under cover, a feature greatly appreciated by those of the senior Medical Staff who favoured us with occasional visits on rainy days.

The success of our efforts at Aveluy caused a good deal of surprise among our less energetic neighbours and won us considerable commendation from those in Authority, for the site had previously been abandoned as hopeless, and our material resources had not been by any means extensive. As a result, when later on it was decided to open a large Corps Main Dressing Station for this Sector, the task of its design and arrangement was allotted to me, and our site was chosen in preference to others as being at once the most central and the most suitable.

But although the above description may again suggest that we considered we had done a good deal to increase the comfort of the wounded, it is only fair to add how fully we realised what a relatively

feeble effort it was in the face of the overwhelming nature of their troubles. No words can ever describe nor can any imagination ever picture the full hideousness of the sufferings endured by these unfortunate men during their rescue from, and their transit through the ruin and devastation of this filthy desert which was all that now remained of a once fair countryside. The houses and villages were blotted out

as if they had never been, the buildings not only destroyed but the very bricks and mortar ground to powder.

Of natural objects there were none, not a vestige of tree or blade of grass; nothing save mud for miles and miles pitted with myriads of shell-holes close to and cutting each other like the cells of a honey-comb.

And if the life of the Infantryman was bad, that of the stretcher bearer was worse, and their carriage of the wounded amid constant shelling in this trackless, roadless waste, remains even now after nearly five eventful years, a loathsome nightmare of dismay and horror unspeakable.

(c) Fins.

There were few episodes in the War more intensely dramatic than General Byng's great attack towards Cambrai in November 1917. This was so, not only from the extent and secrecy of his preparations, but also because of the wonderful success which attended the earlier stages of the battle and the profoundly demoralising effect which it had upon the enemy. Had he been supported by the fresh Divisions which might have been available had they not been massacred in the mud of Passchendael, the early months of the following year would have had a very different tale to tell. As it was, however, not the least surprising of the exciting events of those days was the unexpected success of the violent German counter-stroke which the attack evoked, and it was to assist in repelling this amazing advance that our Division was suddenly hurried south from Arras on November 30th. 1917, and literally flung into the gap near Cambrai, to fight without Artillery and without Reserves, a soldiers' ^{battle} alongside the hastily re-called Guards' Division, and there having fought the Boche to a standstill and beaten him, our men were left to re-establish and reconstruct as best they might, the battered and broken British Line.

Our own share in these glories and dangers was rather a minor one, for although our bearers were as usual performing prodigies of valour on the wastes of Welsh Ridge, and were searching the tangled mazes of the Hindenburg Line for abandoned casualties, our main body was ordered to the derelict site of a deserted C.C.S. on the hill between Fins and Nurlu, to organise a Main Dressing Station for the whole of the IIIrd Corps, whose arrangements Medical as well as Military had sustained such an unexpected upheaval.

Here for once there was no lack of room, in fact for our immediate purpose there was far too much, a state of things so unique in our experience, that our men were at first inclined to scatter and spread themselves so widely that they were in danger of making co-ordination unnecessarily difficult.

This was however very quickly checked and after a hurried survey of the place, certain huts were selected for immediate use, their detailed organisation being postponed until the critical days were past. Nor was the gravity of the situation to be derided, for before we had been in the place more than an hour I was secretly told that though there were any amount of casualties awaiting treatment, we must never let the Dressing Station get congested, nor were we on any account to unpack more material than was absolutely essential, for we might have to clear out at any

moment, and must be ready day and night to evacuate all our cases, and to pack and march at twenty minutes' notice. So uncertain were our Higher Command of the intentions and the strength of the enemy at that particular juncture that this state of apprehension persisted for a day or two, and well it might, for the chaos and confusion in the fighting area were so absolute and complete that few of the troops had any idea where they were or what they were doing, and communications with them and between them were alike so hopelessly bad that it might truthfully be said they had simply ceased to exist.

After a day or two however things settled down, and we began to get the place into some sort of order though how to adapt it to our usual system seemed rather a problem, for it was impossible under the circumstances either to move or materially alter the construction of the huts. We therefore took in hand our three large ones and by dividing them up into suitable compartments we were able to give each one its own three usual sections, namely reception, dressing and evacuation rooms and thus make each one in itself, a complete and independent unit. We then arranged that they should work either together or separately as was necessary, and lastly by segregating our casualties into the usual three classes we succeeded in establishing a measure of order and method which we saw would be fairly satisfactory if we could but turn the whole camp round.

COOKHOUSE

XXIV.

EMERGENCY MAIN DRESSING STATION

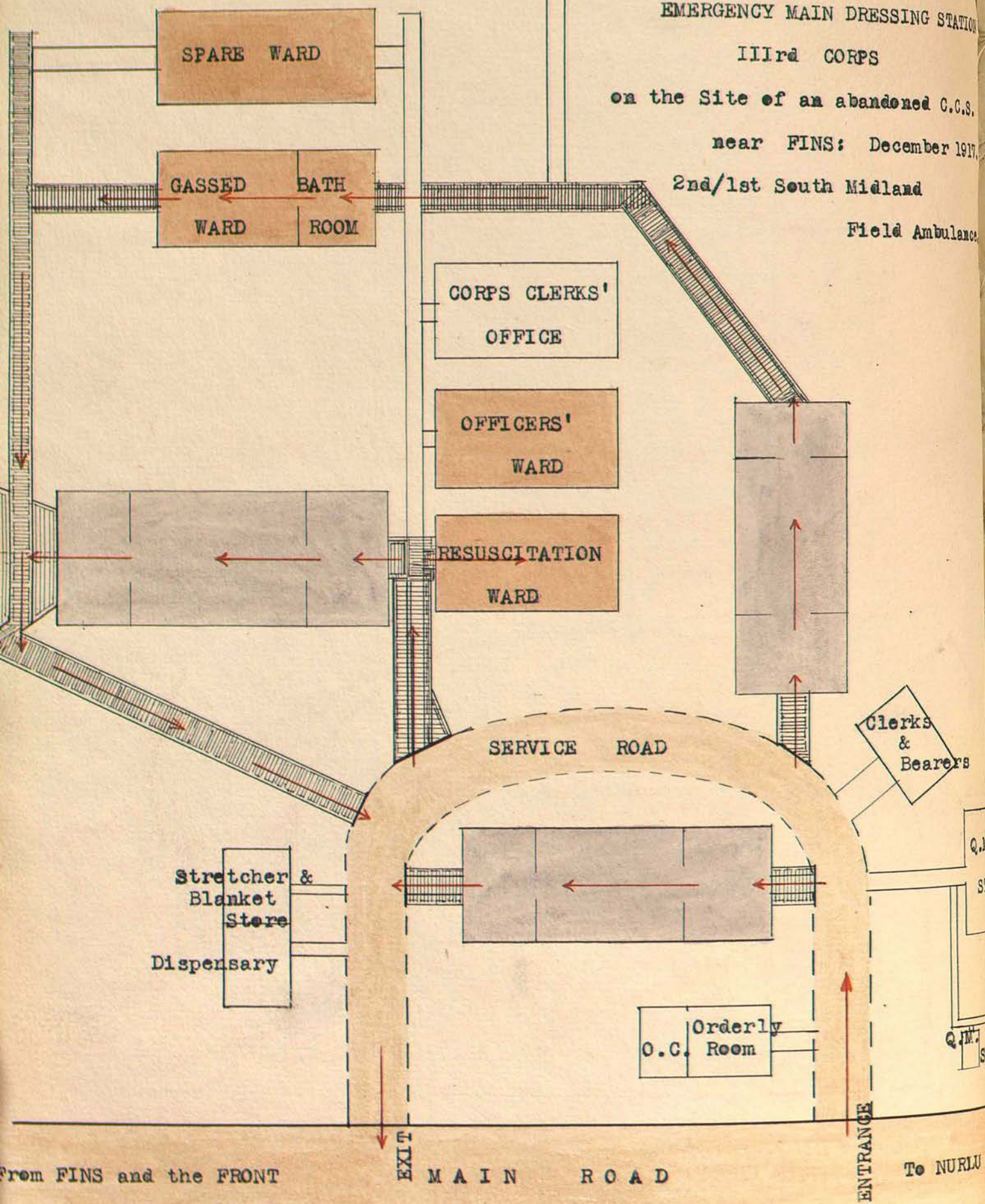
IIIrd CORPS

on the Site of an abandoned C.C.S.

near FINS: December 1917

2nd/1st South Midland

Field Ambulance



This was of course out of the question but we achieved the same end by the simple expedient of reversing the entrance and the exit, and by this means once again became possessed of a Station as like our constant and well-tried pattern as the nature of the ground and the buildings would allow.

As will be seen by a glance at the plan (PLATE XXIV.) the result was not unlike our other Dressing Stations. The long hut nearest the main road took all the ordinary mild stretcher cases, and also when the pressure was not great, the bulk of the walking cases as well. The second hut was kept for Gassed and Emergency cases and its evacuation room communicated direct with the bath house and the special Gassed Ward where they could receive expert treatment in detail. The third hut, which having been the operating theatre of a large C.C.S. was fitted up with a luxury and lavish comfort hitherto undreamt of by any of us, was kept for the seriously wounded and in it much excellent work was done with great interest and almost delight by our surgical staff, who for once had the chance of working amid surroundings the like of which they had never seen since they left the comfort of the civil hospitals at home.

The rest of this camp requires no description in detail, for as it was purely temporary and as its usefulness and indeed its occupation lapsed with the

disappearance of the emergency which had called it into being, so too did our attempts to make it either more perfect or more permanent; and it is cited here merely as an example of the way in which we tried to force even semi-permanent buildings and the most unlikely circumstances to conform in some degree at least, to that ideal whose worth and value we had so often proved and to which we had never pinned our faith in vain.

IV. MEDICAL WORK IN THE FIELD.

Although it might be expected that the bulk of our work as a Field Ambulance with the Army in France would be of necessity Surgical, that was not really the case. It is quite true that most of our more strenuous activities were engaged in rescuing and treating the wounded, but as has already been said, the limits of human endurance decreed that only a relatively small proportion of the fighting man's time could be spent in actual battles. And further, the severity of the fighting was such that a spell of only a very few days in an engagement of any importance, was sufficient to deplete the ranks of the Battalions to such an extent, that it became necessary to withdraw them until reinforcements could be absorbed and trained, so that the Division might be made fit once again for active warfare. During these periods of rest and re-organisation our duties were purely Medical.

Again, great battles required such an infinite amount of preparation that they could not possibly occur every day, and during ordinary 'trench warfare', the routine holding of the line, medical casualties were almost as numerous as the wounded. The Wastage of the wounded which was unpreventable or at all events unprevented, and of the sick whose numbers were always a grievance among the fighting Officers, was

a constant and recurring problem, and an anxiety both to those in executive military Command, and not less to us and to those of the higher Medical Ranks who officially controlled our activities.

During heavy fighting, of course, all the sick had to be evacuated just as were the wounded, for they could find no shelter or comfort anywhere near the front and were merely an encumbrance, a serious handicap to the fighting troops, which must be got rid of without either delay or argument. But when fighting was not severe or urgent, then around their disposal there raged a perpetual wrangle concerning the wickedness of robbing the Battalions of carefully and laboriously trained men, who were invariably alleged to be only slightly seedy with a temporary indisposition, and many pages both instructive and amusing might indeed be written on the intricacies of this vexed question. And as was natural, in all these discussions the chief Medical protagonist was the adjacent Field Ambulance and more particularly its Commanding Officer.

The Battalion Commander and his Adjutant, the Brigadier and his Staff, and even the "A" and "G" branches of Divisional Head Quarters, all hated with a matchless vehemence every Medical Officer who was supposed to be guilty of any softness or undue leniency towards the sick soldier, or who was inclined to evacuate him to

the Base upon too slight a pretext, and living as we did in close association with these gallant fighting men, and sharing as we did in a minor degree their dangers and anxieties, we could not fail to appreciate to the full the justice of their attitude.

The difficulties were however manifold and the discussions never ending, "Don't send my men down the line", said a fearless and gallant Brigadier, "No man can really be said to be suffering from Trench Foot till both his feet are gangrenous"! "Nonsense," replied the Field Ambulance, "You don't know what you are talking about. Do your own job and leave ours alone. Send us your Trench Feet early and we'll send them back to you cured in a week. Keep them in the line as you are doing at present, and very soon you'll have no Brigade left to command". That conversation actually took place and led to a better understanding on one point, and indeed not infrequently when we were left to our own devices we found that with mutual friendliness and goodwill much could be safely done to meet the wishes of the combatants. But any such private and local arrangement was not often possible for long, and generally the untimely interference of the higher Medical Authorities managed to exasperate both sides and to upset the coach. For it is scarcely unfair to record

that, as many of them though infinitely authoritative were pathetically unmedical their inelastic orders based for the most part on erroneous and misleading generalisations, caused many of our best endeavours to be utterly and irretrievably frustrated.

Some of them however were both human and reasonable and gave the men on the spot a free hand, and this we enjoyed especially when running a Rest Station, and also in the Spring of 1917, when the ruthless torpedoing of Hospital Ships by the Hun having limited the extent of the possible evacuations to England, we were encouraged to hold all our sick for some time so as to prevent undue pressure on the somewhat crowded establishments at the Base.

But even with the best intentions all round it was often not easy to know what to do. One A.D.M.S. anxious to conciliate his own Brigadiers would arrange to keep all their sick in the Divisional area and would suddenly find the Division under orders to move at once. Corps and Army being busy, were entirely unsympathetic and therefore all these men had either to go to the Base or starve. The result was that there was much blaspheming among the Olympians and when this descended in withering heat on the unlucky A.D.M.S. he decided that never again would he risk that. Another would refuse to keep any sick at

all until he in turn fell foul of all his fighting comrades, and they being convinced that he was a hopeless fool would probably try their best to have him sacked.

In spite of all however it was as usual largely a question of proportion. The fighting Officers were seldom unreasonable, and if they knew that things were in the hands of Medical men of proved capacity with a sound knowledge of general practice, they were generally perfectly satisfied, and knowing that such men had sufficient common sense to treat them fairly and openly and to keep them fully informed of their intentions, and the reasons for their decisions, they were in most cases not only tractable but in my experience absurdly grateful for everything that was done for their own welfare and more especially for all that was done for their men.

1. General Hygiene.

Throughout the War, the health of the British soldier speaking generally, was good, and it is probably a fair index of the enormous advance in recent years of the efficiency of preventive Medicine that it can now be truthfully recorded that no epidemic among the troops ever spread to any important extent.

Their physical welfare and their personal hygiene were taken in hand very seriously by nearly everybody, but by no one more thoroughly than by their own junior Officers, and though their resources were often slender, and though the exigencies of service made even these frequently ineffective, still their attempts at supervision were sincere and constant, for the Officers were like the men of the very salt of the earth. There were of course considerable differences between Battalions and it must at times have been disheartening to see the results of months of the most assiduous fostering care and training, dissipated in a single day by some sudden adverse stroke of the evil fortune of war.

But failure was never acknowledged nor was finality even thought of and so the process went on. What we could do to help it we did, and all our resources were freely at the disposal of all the fighting units with whom we were in touch; and if these included things as intangible as health lectures and as actual as medical stores, so also could we offer generous assistance in their commissariat and their sports, as well as the relaxations of music and entertainment which could always be provided by the efforts of our concert party.

The Battalion Medical Officers were often lamentably young and inexperienced, and though they amply made up in courage and gallantry what they lacked in medical knowledge, many of them were but recently qualified and had been very indifferently trained in the details of military life and work. Still they were apparently considered good enough for duty in the shambles, and while we marvelled at the System which pushed them up so cheerfully into the line, once there we did our best to father them and to provide them with a medical refuge to which they could always turn for advice and help and sometimes too for relief and support in their inevitable troubles and difficulties.

We taught them all we knew, how to look after their men in action and in rest; how to supervise their water supply, and the subtleties of its purification and its transport to the line. Also the importance of food and the intricacies of its supply, its storage, and its cooking, especially with reference to the delivery in decent order, of that part of it which was destined for the men in the trenches. And when opportunity offered we discussed with them and their fighting brethren all sorts of medical and other questions, from the echoes of vague bacteriological inanities from the Base, to the

pet hobbies and crotchets of those of our superiors who lived in places so far removed from the sordid scenes of battle, murder, and sudden death, that they were naturally much more familiar with our daily difficulties than we were ourselves.

We helped them too, in their heroic attempts to keep their men's bodies clean and their feet fit for marching, for it was as much their duty to see that the men were fit to fight as to tend them when they were wounded.

This was of course merely part of the public health work which formed so large a portion of our Medical duty, and as it included many important details of camp construction, such as the building of latrines and bath-houses, its discussion will be found under the more appropriate heading of Sanitation.

For the present, in order to avoid too discursive a flow of generalities, I confine my remarks to a very brief and imperfect survey of some aspects of a few of the diseases peculiar to the campaign which we were accustomed to handle familiarly, omitting altogether, as this is a personal record of actual work, all reference to other matters which, though of vastly greater importance were as regards actual work and experience, entirely outside our province.

These were the concern of those who lived amid more settled and permanent surroundings, and as accounts of their work reached us only in

the form of a confused medley of ill-assorted theory and conjecture, astonishingly free from either conclusion or definition, comment on it would necessarily be equally vain and valueless.

2. Medical Diseases.

The illnesses which I have selected in illustration of our Medical work may from their extreme simplicity and their very obvious character seem trivial enough, but if it is fair to estimate the importance of a disease as much from the personal discomfort and incapacity to which it gives rise, as from the subtlety of its pathology or the inherent interest of its clinical manifestations, then surely I need offer no apology for the following list of ailments.

Simple or not, it may be truly said that each one of them was the cause of enormous sick wastage and gave endless trouble and ⁿanxiety both to the patients and to all those concerned in their prevention and their cure.

From the enormous numbers of them that passed through our hands it would indeed be easy to write a whole thesis on each group, but for my present purpose it will be sufficient merely to review each one shortly and in outline, indicating our general experiences and such methods of treatment as our resources made possible.

1. Bodily Parasites:

a. Lice.

b. Scabies and Impetigo.

2. Trench Fever:

3. Trench Foot:

4. Debility:

5. Shell-Shock:

1. Bodily Parasites:

a. Lice:

To those whose acquaintance with the ordinary louse is confined to the casual encounter with it in poor class practice or in the out-patient departments of our hospitals, this particular parasite is probably of little interest and no great importance. And to all such, and until we went to France we should have included ourselves in their number, only the experience of active service could have demonstrated the measure of their misapprehension.

We knew that both Officers and men frequently reported they were "lousy", but not until I had seen a whole Battalion of approximately a thousand men, seated by the roadside naked to the waist, killing their lice and picking out of the seams of their shirts the myriads of eggs which had accumulated there during a few days in the trenches, had I any idea of the dimensions of the problem offered by

the presence of these ubiquitous pests. Suffice it to say that though it was possible for some of the Officers who were living under favourable conditions to keep free from such visitants, no man could possibly do so, and the great majority of both the Officers and the men whose habitual dwelling place was the trench-zone with its filthy dug-outs and shelters, were literally alive from top to toe with swarms of lice whose presence made life at first a misery and later on an unwilling but helpless resignation, punctuated by orgies of scratching and frequent though futile attempts at cleanliness.

What the ulterior results of this universal scourge were I am unable to say, and I am still uncertain whether or not it was ever clearly proved that the louse did actually transmit real Trench Fever, or other general diseases. Still it was certainly the cause of much cutaneous irritation and infection, and if it had never caused anything more serious than the intense bodily discomfort and mental anguish inseparable from its continued presence on virgin soil, it would all the same merely in virtue of its numbers, have established a unique position as a most potent menace to the health and comfort of the troops.

The Medical Authorities did all they could in the early days to combat the evil, but it was beyond the wit of man to devise measures that could under the prevailing conditions be in any way effective, and the extent of the attempts may be summed up in bathing, the provision of laundries, and the disinfection of all clothing and blankets by super-heated steam.

The early arrangements for bathing the troops comprised every possible thing from the vats of a disused brewery to the roughest of improvised tubs, but long experience seemed to prove that the Thresh steam disinfector though useful was unreliable and incomplete in its action.

Our own efforts were at first directed towards the comfort of our own men and we soon realised that wherever they were, they must have facilities for washing beyond the inevitable bucket. When canals and streams were not available, we tried improvised baths of all kinds from a soap box lined with waterproof sheets to more ambitious and more elaborate conceptions, details of which will be found later on, and in these we contrived to have their shirts and uniforms smeared or powdered with various commercial insecticides, applied especially to their seams and corners which were then thoroughly scorched with hot irons while the men were bathing. After long

experience with the Thresh Disinfector and this rather crude and protracted method, some one in the later stages of the war demonstrated that dry heat was much more efficacious in killing both lice and eggs than moist, and this led finally to the building of many dry heat " delousers " in which we naturally took a keen practical interest. These in their various forms we studied with great care, and eventually evolved a very useful pattern of our own, sufficiently effective and mobile to be of the greatest possible service to ourselves and our associated Brigade.

With this we intended to carry out some rather extensive experimental work which would probably have been of considerable future value, but shortly after its completion our sudden absorption in the unrelenting activities of that rapidly moving warfare which ceased only with the Armistice, made further effort impossible and indeed unnecessary. As the method may however be still of some service, sketch plans with a short description of the apparatus are included here and it is hoped that they will prove sufficiently clear to show its simplicity.

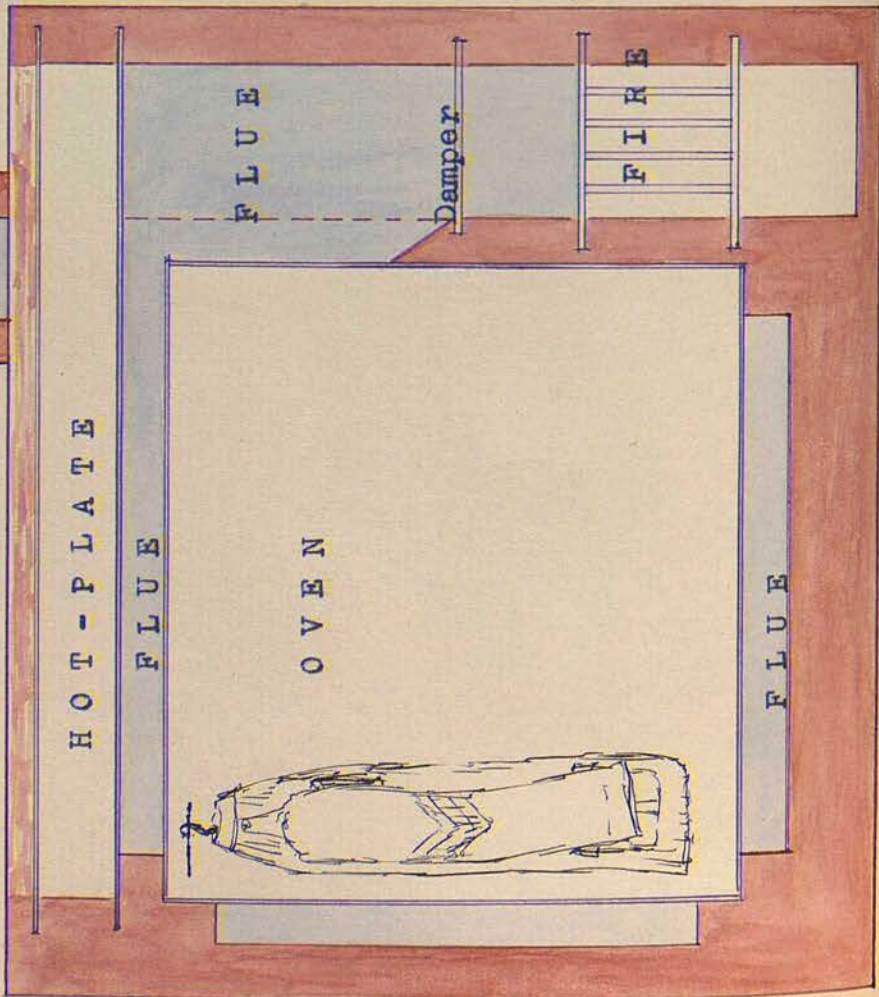
During our researches into the details of field cooking we had found an oven easy to make and simple to erect for use. With these advantages it combined ease and rapidity of heating with a minimum

DELOUSING BY DRY HEAT IN SPECIAL PATTERN OVEN

Section from side to side showing

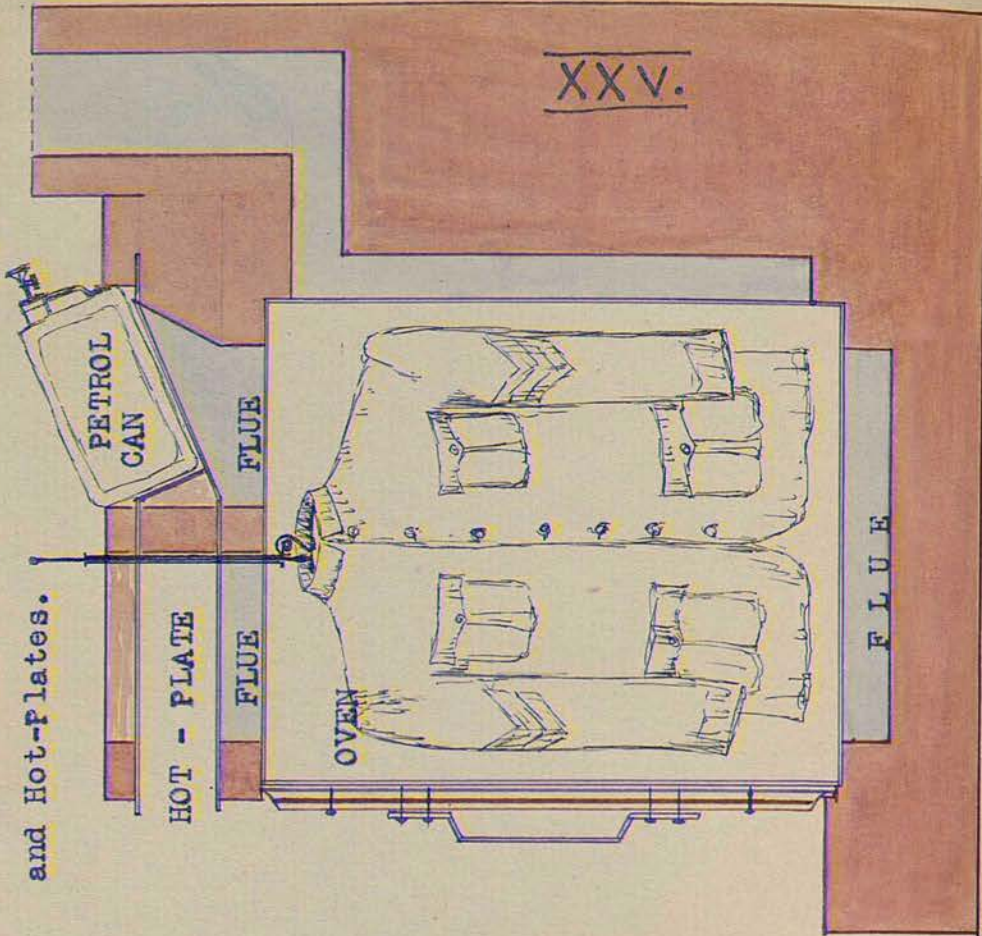
Fireplace, Flues, and Hot-Plate.

Flues - Blue
Brickwork - Red



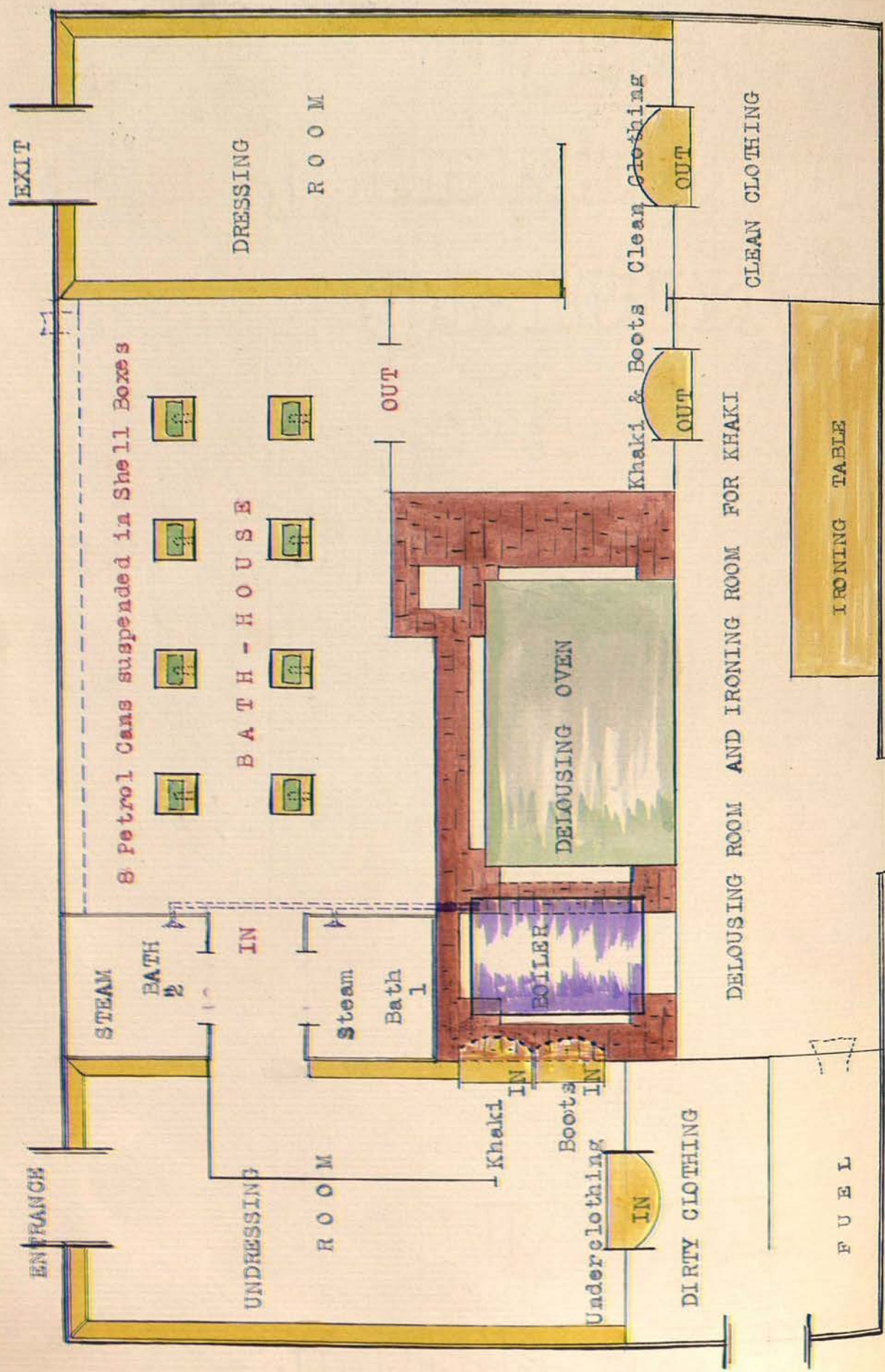
Section from front to back showing

Chimney, Flues, Thermometer, padded Door, and Hot-Flates.



of fuel, simple regulation, and very high efficiency, and we had in consequence adopted it and used it exclusively in all our camps, finding it especially valuable in Rest Stations where we had to cook well and generously for large numbers of men. It was nothing more than a metal box, which could be easily made of odd bits of sheet iron, corrugated iron sheets hammered flat, or even an old biscuit tin, appropriately set up in a specially constructed flue, and we decided that if this were made and erected on a sufficiently large scale, it would certainly give dry heat an exceptional chance of doing its worst for any infected clothing placed inside it.

For use the oven was set up on a few old bricks fixed more or less soundly by mortar made of a mixture of mud and water, with a small fire place arranged at its right hand side. Rough brick walls were quickly run up on each side and above the fire a damper was fixed to regulate the draught. With odd pieces of metal and iron rods, and more bricks, the flue was arranged to go up the right side of the oven, over the top, down the left side, across the bottom, and up the back, into a chimney improvised from anything, not infrequently merely a sheet of corrugated iron rolled up into a tube and tied round with a bit of old barbed wire.



8 Petrol Cans suspended in Shell Boxes

This arrangement ensured the rapid and equable heating of five sides of the cube, and as the top always had heat enough and to spare, we usually made the excess heat a hot plate, for dishes when it was in a cook-house, and to dry the men's towels when we were building for our present purpose. In the accompanying plan where there was a bath house attached, (PLATE XXV.) this hot plate was divided into two parts, front and back, the former for the towels and the latter to heat petrol cans full of water which were used as will be seen later, for portable spray baths. The only danger with this oven was that of scorching the clothing, and this was guarded against by the insertion of a special thermometer which stuck out through the roof and indicated to the attendant orderly how to set his damper.

b. Scabies and Impetigo.

Closely allied to the louse both in its nature and its effects was the *Acarus Scabiei*, and though this parasite could scarcely rival the louse in the number of its victims, still its ravages were more serious and their cure so much more difficult and tedious, that the patients though relatively few in number were much longer absent from duty.

Our chief trouble and complaint with regard to Scabies was that it was far too seldom spotted in its early stages, so that a great proportion of the cases were chronic and far advanced before we got hold of them for treatment. This we know was due to a variety of causes with all of which we had the intimate acquaintance of long association, and though we were prepared to make every possible allowance for their many and undoubted difficulties, we are abundantly satisfied that the chief one was the carelessness or slackness of the Battalion Medical Officers. The excuses for their obvious failure both in and out of the line were often genuine enough, but they were still excuses, and it was well known that in any Battalion or indeed any other formation looked after by an efficient man who was keen on his job, especially when he was backed up by a strict and sympathetic Officer, Scabies was practically unknown.

Over and over again we tried to have it made compulsory to have weekly inspections of all the men, stark naked, by their M.O. but these were seldom carried out, and when done they were more often than not completely useless, for unless the doctor had both a large amount of persistence and an intimate acquaintance with the Unit's habits and regulations, and sufficient personality to impress his ideas and his will upon the Adjutant, it was a very difficult matter to guarantee that at the end of any such parade he had seen anything like the full complement of the men. On most of these parades the same fellows turned up as they did on everyone that was called, and invariably they were "the whole who need not a physician," but to go and find the cooks, the batmen, the runners, the clerks, the orderly-room hangers-on, the Quarter-Master's staff and all the specialists on detached jobs as well as all those who on some pretext or other avoided going into the trenches, in fact, to make a Nominal Roll of the Unit and to certify each week that every man from the Regimental Sergt. Major to the latest joined recruit had been examined, though both necessary and possible, was a task far beyond the power of most of the Medical Officers whom it was our privilege to meet.

Similar difficulties occurred in other arms of the Service. Artillery Brigades were frequently

broken up and moved away from their own Divisions, while others of them were permanently on detached duty as Corps Troops or Army Troops, and with other specialised units were often in a medical sense, nobody's children. They might of course be able to arrange for casual medical help when their men were actually ill, but frequently for long periods they were entirely without any of that valued personal attention which might have safeguarded them from the gross and hideous neglect which was commonly their lot.

In my own Ambulance this weekly medical inspection was a fixed and definite order, part of the unalterable routine which had to be done somehow and for the omission of which no excuse was ever under any circumstances accepted. When possible it was carried out on Sunday mornings while the men were getting up, but it was understood that if that failed it had to be done as soon thereafter as was possible, with the natural result that during the whole time we were in France we had only three cases of Scabies. Of these, two were recently joined reinforcements who were discovered within a few days of their arrival, and the other was one of our own men who caught the infection when he was home on leave.

This point has been rather laboured for two reasons. First, it is by no means easy to get those who never saw the patients in a Scabies camp in France, to have any idea of the filthy and abandoned state in which many of these unfortunate wretches arrived for treatment. Secondly, most of this loathsome suffering was preventable, and if the people in power had expended a tithe of the energy they dissipated in vainly propagating their own pet hobbies and cranks, in compelling the junior Officers to concentrate on urgent essentials like this, they might have saved an infinity of trouble and expense, to say nothing of the misery of the patients and the irritation of the fighting Officers, who in this way often lost their most valuable and indispensable men.

During our career we built no fewer than six different hospitals for the treatment of this disease, and though they all had their distinctive features, it will be sufficient to describe the system which we used, and to illustrate it by one plan, no matter how the various places differed in detail according to the circumstances, the premises we used, and the material resources available at the time.

Treatment.

The first Scabies Camp we ever saw was the so-called Skin Depot of the XIth Corps at Regnier-le-Clerc near Merville, which we took over with the Corps Rest Station in the Summer of 1916, and the state in which we found it speedily convinced us that our treatment must have three main objects in view if it was to have any chance of success. The first and most pressing of these was to try to restore some measure of cheerfulness and self-respect among the patients, for when we first encountered these miserable men, we found them regarded as outcasts and pariahs because forsooth our own department, having by their own slackness and neglect, allowed them to get into a hideous state of the most horrible and revolting filth, had then treated them as if it were all their own fault and had convinced most of them that they were very lucky to be in hospital and not in prison. With this atmosphere about, it may be understood that personal pride and interest in life were absent and with them had gone all sense of discipline and even decency, and indeed it was not surprising for their housing arrangements were disgraceful, their feeding deplorable and their medical treatment beneath contempt. Our second point was of course adequate and energetic treatment, and the third, apart altogether from the necessary alterations of the camp and their standard

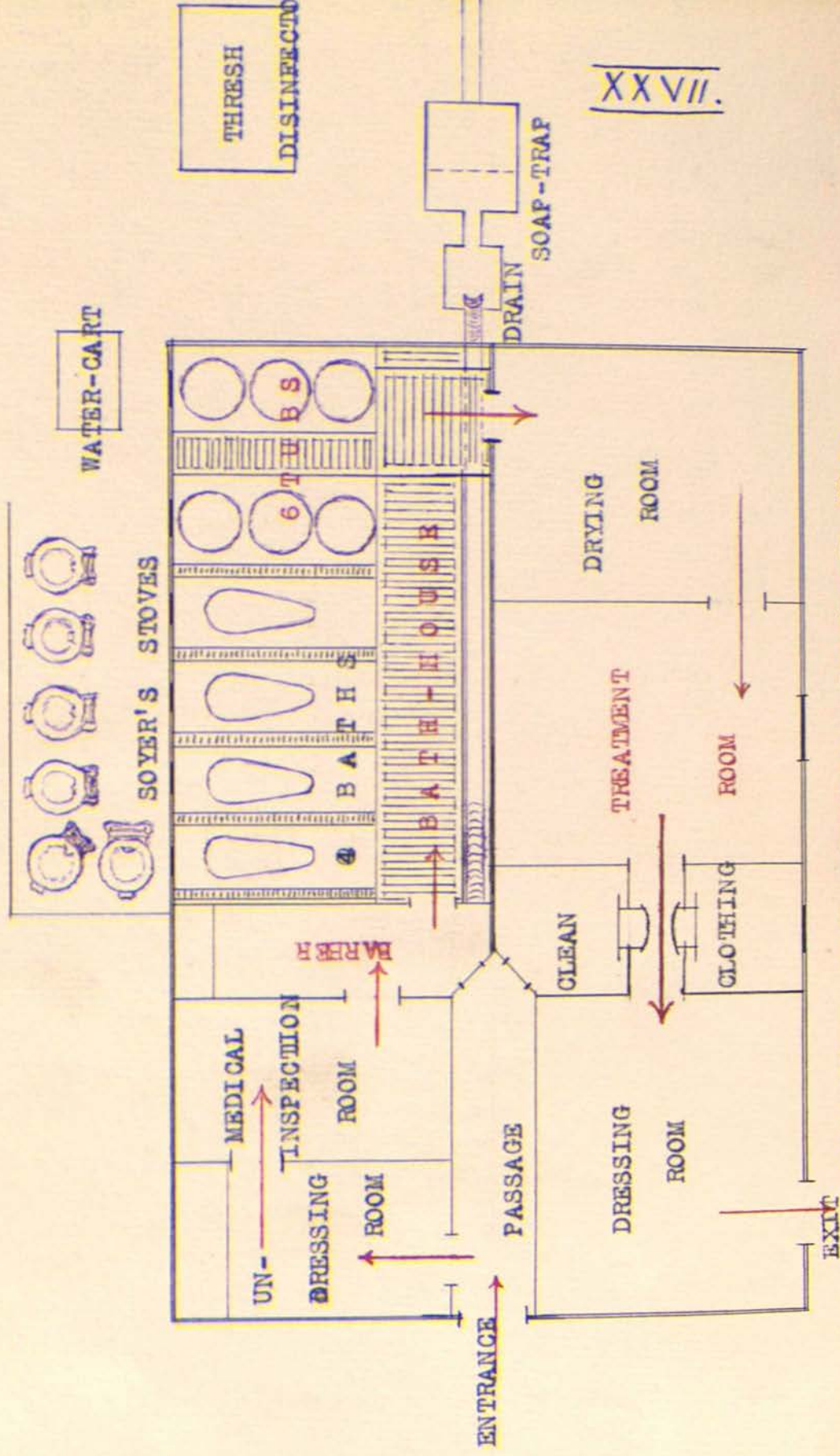
of camp life, was the provision of some kind of hospital clothing for the patients to wear during the time they were on our hands, and the development of some system whereby their own clothing could be either cleaned or replaced so that it might be fit for use when they were ready to return to duty.

Strange as it may seem, the last was the greatest difficulty of all, but it too was in time overcome chiefly through our extensive and intimate acquaintance with all the possible and irregular sources of supply, and by enlisting the help of the British Red Cross Society and of unofficial bodies at home, for the available resources of the Medical Authorities in France at that date, seemed so insignificant and were so carefully husbanded by formality and regulation that we could spare neither the time nor the energy to attempt to tap them at all.

The actual local treatment was carried out without mercy, and if we covered many a man with an acute dermatitis, either traumatic from scrubbing his integument with hot water, soft soap and the ordinary scrubbing brush of commerce, or from lathering him from head to foot with nascent Lotio Calcis Sulph. applied from a petrol tin with a whitewash brush, still we succeeded as a rule in eradicating all signs of the Acarus within six days, and in his subsequent rest and holiday in the Rest Station, the victim had plenty of

time to recover from these by-effects of our thorough and kindly meant if somewhat brutal handling.

For the more severe septic and impetiginous complications we had of course many other resources and we soon built and used an open sloping verandah facing south, where many of them could recline and sun themselves in a state of nature, and in addition we used extensively and with good effect, autogenous vaccines. Ordinary surgical attention was frequently necessary at first, but with improved hygiene and careful attention to the patients' general health the need for all such drastic methods very soon disappeared. Baths apart from actual treatment were insisted on, and suitable aperients, regulated exercise, plenty of good and well-cooked food with the dietetic extras which could easily be procured, soon wrought such a change in the powers of resistance of all the men that their recovery was a simple matter. Cleanliness and regular discipline at meals was also made compulsory, and mess-tins of doubtful quality disappeared in favour of proper plates and dishes willingly supplied by the Red Cross people, so that the patients could enjoy their food like civilised beings, and feel some inclination to suit their habits to their improved surroundings.



14th CORPS SKIN HOSPITAL; Regular-le Clerc.
2nd/1st South Midland Field Ambulance; Summer 1916.

We also introduced our celebrated hair and nail toilet. The men's bodies were shaved completely to start with and the nails of their hands and feet were cut short and properly filed down after which they were forced to submit twice daily to have them scrubbed thoroughly with hard sterilised nail-brushes and a strong solution of Cresol or Lysol, so that if they did persist in scratching their bodies, the amount of subsequent auto-infection was materially reduced.

When the depot had been entirely re-built and all the system set agoing the whole camp was placed on a permanent footing and thoroughly organised, and a glance at the plan (**PLATE XXVII.**) will suffice to show how as usual everything possible was adapted for the rapid and simple handling of a large number of men. The ordinary details of the rest of the camp have been left out for they features of interest beyond the arrangement of the huts and tents in groups, so that the cases of similar severity could be kept together. The plan shows how the men undressed close to the entrance and passed on to the Medical Officer in a state nudity. He then pencilled on each man's pectoral skin the details of the treatment he required and on he went through the barber's shop to the bath house which was equipped to its utmost capacity with tin baths, and tubs made from beer

barrels cut in half. Here both the preliminary scrubbing and all subsequent washing was carried out, the hot water being passed in from the collection of Soyer stoves which we had succeeded by our usual habits in collecting. From there an inevitable and compulsory progress took them successively through the drying room, the treatment room, and finally the dressing room whence, having drawn fresh clothing from the cupboards as they passed, they emerged by the common exit into the general area of the camp. Nor were the amenities of life forgotten, for their cultivation with suitable recreation and amusement helped greatly to rid the patients of that atmosphere of neglect and depression which were the outstanding features of the place when we first took it in hand.

It is perhaps worthy of record that as soon as the men saw what was being done they became quite proud of their surroundings and began voluntarily to tidy the place and started gardening work to enhance still further the improvements which were quickly effected by our workmen. We were also able to reduce their numbers very rapidly and in less than three weeks we had only eighty cases of recovering scabies and impetigo in the depot instead of the three hundred and twenty miserable and neglected wretches whom we found there on our arrival.

2. Trench Fever.

The groups of symptoms to which this name was applied during the war presented several features of interest, and though most of our observations were neither sufficiently prolonged nor intimate to have any great value, still many of us during our time in France had a fairly close acquaintance with the various stages of the affection and it may therefore not be altogether useless to recall our views. The name like its great rival "Influenza" covered if it did not conceal a multitude of avoidable mistakes, and became a sort of Diagnostic haven in which the jaded forward Medical Officers took refuge, and indeed at one time everything febrile was incontinently fitted with this convenient label and promptly dispatched to the nearest Field Ambulance for disposal. At this date it is of course impossible to recall all the various illnesses which we managed to detect under this specious disguise, but I can still remember that cases of Cerebro-Spinal-Meningitis, Pneumonia, Pleurisy with Effusion, Scarlet Fever, German Measles, and Diphtheria were in turn disentangled from the mass of Trench Fever patients which were thus unceremoniously thrust upon us.

In spite of all the difficulties, however, we were able in the end to differentiate clinically many cases as actual Trench Fever, though in the absence of any definite pathology or bacteriological certainty, the diagnosis was always to some extent topical. There were many degrees of severity and as usual the various types were never wholly discreet, but gradually we began to divide them into acute and subacute groups.

The acute or classic form presented a sudden and rapid onset with every appearance of serious illness, including severe general headache with no localisation of the pain. The temperature was often high, from 104° F to 105° F. but more often varying from 102.8° F. to 103.6° F. with a rapid, large, soft and compressible pulse suggesting that of early pneumonia. Typically there were two chief symptoms; excessive weakness from a rapid and severe muscular failure, far beyond that induced by a similar amount of illness from other causes; and, sharp lacerating pains frequently referred to the shin bones but occasionally also felt in the thighs, the arms and shoulders, and in the lower part of the lumbar spine. When in the latter region it felt like a deep bony pain and bore no resemblance to the ordinary backache of Influenza. Many of the patients had distinct and persistent tachycardia without valvular lesion, and this we attributed to an extension of the prevailing muscular weakness to the myocardium. Transient

albuminuria was not uncommon but was not a real nephritis, and there was seldom any discoverable enlargement of the spleen in the early stages. Most of the patients got well and the great majority recovered completely, but their weakness was intense and often prolonged, so that convalescence was correspondingly slow.

The more chronic form of the disease showed itself after a period of increasing illness lasting from six to ten days, during which time many of the men tried to remain on duty. They had mild intermittent attacks of fever with modified pains and discomfort, but by the time they felt compelled to give in and report sick, most of them were very weak and ill and had a peculiar sallow and earthy complexion which was not jaundiced. The temperature in these cases rarely rose above 101.6°F. or 102°F. but as in the acute form these men also showed extreme muscular weakness, and many of them developed the same rapid heart.

Some of them suggested mild ambulatory typhoid but this was carefully excluded. Bowel symptoms were absent and constipation was much commoner than diarrhoea. The illness generally lasted for several weeks, and seldom altered in character to assume the more acute form.

Complications and sequelae were uncommon.

Recovery was the rule and was good, but here again convalescence^{was} slow and the muscular regeneration both cardiac and general was very gradual though usually complete. Many of these men showed distinct evidence of splenic enlargement before they got well.

There is little of interest to add regarding treatment which was of necessity largely empirical and expectant. Rest, absolute and complete was undoubtedly their chief necessity, and good nourishing food was as essential. We tried Quinine and Aspirin in all their available forms and both failed completely either to cure the complaint or to relieve its symptoms. Free and thorough purgation with purification of the intestinal canal seemed to be of value, and we had better results from a simple mixture of potassium Bromide and Sodium Salicylate in small doses frequently repeated, than from any of the drugs we used. Occasionally the shin pains were so severe that they required sedatives but we avoided their routine use as much as possible. During convalescence the Calcium tonics were good and as usual small doses of Strychnine and Strophanthus were valuable in helping the heart muscle to regain its tone, but the most important things were fresh air, cleanliness, good food, and a slow convalescence with carefully graduated exertion in the early stages of recovery.

3. Trench Foot.

I have already hinted that this affection was the cause of much argument between the forward medical personnel and their fighting brethren, and enough has been said to show what a real difficulty it presented to both. The condition at first appeared to be a sort of temporary Raynaud's disease affecting the feet and lower part of the legs. It was practically confined to those who had to spend long periods, several days and nights at a time, standing about in waterlogged trenches with no chance of securing either sufficient warmth or bodily movement to keep their circulation active. In consequence of this their feet became first cold, then numb, then white and apparently bloodless and dead. Thereafter they suffered from venous congestion with distention of the veins, oedema, and later partial destruction of the skin by a sort of moist gangrene. In many cases this was followed by extensive sloughing with rapid sepsis of such severity that very often amputation high up was insufficient to preserve the patient's life. Such was the clinical picture of the earlier cases, and though it was a horror to be dreaded, its pathology seemed to us to be both simple and obvious.

What the ultimate decision was as to its actual pathology I have unfortunately never been able to find out, but in France we were variously informed that it was a venous stasis, a neuritis, an infective cellulitis caused by a special organism, and several other things which I have now forgotten, though most of these seemed to us merely the fairly obvious sequelae of an apparently simple and largely mechanical condition.

The suggested treatment varied a good deal and we were naturally more interested in prevention than cure, though in spite of the wealth of opinion as to its nature, there were only two leading ideas as to how the condition might be guarded against.

(a) The French school advocated scrupulous cleanliness and dryness of the feet before entering the wet trenches, a dusting powder being used after thorough washing, which contained a percentage of camphor which it is hoped would help to dilate the superficial vessels and keep the feet warm. This system was undoubtedly of value in certain cases and the extra cleanliness and foot toilet at all events served to lessen the virulence of the septic infection, which invariably followed any considerable damage to the protecting layers of the skin.

(b) The British method was to rub the feet and legs thoroughly and frequently with whale oil, and to protect these parts as far as possible from the effects of the water by the wearing of waterproof gum-boots. Of this practice we naturally saw a great deal and with it we disagreed so profoundly that we resolutely refused to adopt it in the case of our own men.

The origin of this anointing appears to have been the habit of long distance swimmers, covering their bodies with a layer of fat to protect them from the effects of prolonged immersion in cold water. We have yet however to learn that these people rubbed their greasy preparation in so hard that it actually penetrated into the intercellular spaces beneath the skin, and consequently we judged that the rubbing here was a misapprehension. It was of course intended to increase the local circulation and when that had been done, it might have been a good thing to cover the parts with a protective layer of fat, but the method in use seemed to us to be a complete contradiction, and whether it was that the oil acted as a foreign substance in the tissues and actually spoiled the local capillary circulation by its presence we do not know, but it is a fact that the feet when they had been rubbed with it, were invariably much colder than they were before, and it thus seemed to intensify the very condition it was commonly supposed to prevent.

Be that as it may, we did the best we could to have its use curtailed among our own troops, and I therefore append here copies of two memoranda which I issued when temporarily in Medical charge of the 61st Division. These illustrate my beliefs and work and show that the situation was viewed by us with some concern.

There is also little doubt that though the indiarubber gum-boots were a great protection, they were at the same time when worn too long or too frequently, a grave danger. Many of the men when they had once put them on continued to wear them even while walking about, until they acted simply as poultices leaving the wearers' feet soft and sodden in the condition known as "washer-woman's hand", from the action of their own perspiration. It was to obviate this added and at first unsuspected danger, that I emphasised the necessity for the "complete understanding" of their use by all responsible Officers and N.C.O's.

The second circular though favourably received by some of the fighting Officers, was never really tested because it was our good fortune to spend the ensuing winter in a part of the line where a natural fall of the land prevented our trenches from becoming dangerously waterlogged.

MEMORANDUM

to all Commanding Officers in the
61st (South Midland) Division

TRENCH FOOT is a definite disease of the feet and legs now fully recognised by the Medical Authorities, and it is the cause of such serious sick wastage during the winter months, that it is incumbent upon all to make every possible effort, both preventive and curative, to diminish as far as possible unnecessary losses to the Division from this cause.

PREVENTIVE

TREATMENT. Apart from the efficient supervision of the general health of the men by the Regimental Medical Officer, and his regular and frequent inspection of their feet, this is purely an administrative service and must be carried out by the fighting units.

It comprises:-

- (a) The issue of protective gum boots and the complete understanding of their use by all combatant Officers and N.C.O's. This implies a thorough and complete gum boot discipline in every unit concerned.
- (b) The provision and intelligent use of an adequate supply of clean dry socks.
- (c) The regular supply of hot food and warm drinks while the men are in the trenches. All these have already been detailed in the Divisional circular memo No: Q/762: dated 5.10.17.
- (d) Lastly and most important of all, the preparation of the feet to enable them to withstand the attacks of this disease before the men enter the trenches and during their tour of duty. The French method will be adopted by our Division, and Stations will be provided for this purpose at the Battalion gum boot stores near the line. These will be conducted regimentally, but they will, in the first instance, be supervised by trained N.C.O's from the Field Ambulances.

CURATIVE

TREATMENT.

The diagnosis, disposal and treatment of all cases of Trench Foot however slight, are purely Medical Services and may not be interfered with by any non-medical persons, no matter how gifted they may be.

No man should be blamed or crimed merely because he develops this disease. The powers of resistance against its attacks are curiously variably. The thorough carrying out of the preventive treatment is no guarantee that the men will escape, and many men might neglect all our precautions and never suffer to any appreciable extent. On the other hand, severe disciplinary measures might with benefit, be adopted against any man who does contract the disease and can be proved to have neglected to carry out the Divisional Orders on the subject, issued solely for his protection.

If the disease is recognised and efficiently treated in its early stages it is eminently curable, but it demands urgent and thorough attention both general and local.

The man must have in addition to local treatment, rest, warmth, comfort, good hot food and peace of mind if he is to return quickly to his Unit in fighting trim. This cannot possibly be secured not can local treatment be confidently undertaken in the forward zone; therefore the patient should be sent back early to a Field Ambulance specially arranged and fitted for his reception.

Field Ambulances have been blamed for evacuating these cases too freely, but this result was always inevitable if the Field Ambulance had not been made ready before hand to treat them and if the men were not sent down until the disease had gone too far. The sole arbiter as to the necessity for sending men down is the Regimental Medical Officer, and more men will be saved to the Battalions^{*} than if he is thought to be encouraging scrimshanking and is obstructed in his work. It is better to give a few men three or four days unnecessary treatment and rest, than to lose men altogether who might have been saved by timely intervention.

^{*} if he is given a free hand,

The whole Medical Service of the Division is prepared to do its utmost in this cause, and we will secure the best possible results if there is cordial and consistent co-operation between the Battalions and our Officers; and if any Unit Commander desires extra Medical advice and assistance at any time, it will be provided immediately, so far as our resources at the moment permit.

Signed: George Mackie.

Lieut.Col: R.A.M.C.(T.F.)

A/A.D.M.S. 61st. Division.

12.10.1917.

MEMORANDUM

TO "Q". 61st DIVISION.
-----Trench Foot and its prevention.

It is sufficiently obvious to all concerned that despite the best endeavours of both the Executive and Medical Branches, Trench Foot remains a potent cause during the winter months of serious wastage among the Infantry in the line. The following suggestion is therefore offered for the consideration of "Q", and "G", solely with the desire to reduce if possible the number of casualties from this source.

It seems to me that no matter what predispositions may or may not exist, the actual determining cause of the complaint is continuous and prolonged inactivity of men in waterlogged trenches, and this is what ought to be altered.

At present the Battalions charged with maintaining the integrity of the line are usually disposed with their Companies echeloned one behind the other, each one extended laterally over a comparatively broad front with for example; "A" Company in the front or outpost line, "B" in support, "C" in reserve, and perhaps "D" resting; this arrangement lasting usually for four days and nights. This in a bad area, leaves all the men in "A" and "B" exposed to the water for so long that no precautions however careful can be expected to have anything but very moderate success.

It is therefore suggested that the Companies should be disposed in depth on a narrow front, finding their own supports and reserves by platoons which move in a strict circular tour once every twenty-four hours. The platoon on outpost or front line duty would move straight to rest, each other platoon moving up one stage towards out-post duty.

This would in my opinion ensure that no man was (except of course in an emergency) continuously exposed to impossible conditions for so long a time as to prevent his being able to recover completely from their effects within the compass of his own circular tour of duty. It would also do away with all the so-called

sock changing and foot rubbing in a flooded front line, where I am bound to say I consider all that kind of thing is pathetically futile and out of place.

I am aware of some of the difficulties that this change would entail, and doubtless there are others of which I am perforce ignorant, but I should be glad to know that the subject had been considered, in case anything of value might emerge from its discussion.

D.H.Q. 61st Division
14/10/17.

Geo. Mackie, Lt. Col.

Act./ A.D.M.S.

4. Debility:

The inclusion of this, a mere stage of secondary weakness, as a separate entity in a list of so-called Medical diseases, may seem to some both unnecessary and rather far fetched, but by Debility in this connexion I mean a group of cases so distinct that they forced themselves very specially upon our notice.

They were mostly young soldiers who had been for long periods exposed to the climatic rigours and the mental and physical strain of life in the actual trench zone, and in consequence suffered from extreme weakness, exhaustion, and lack of the power of resistance, although they could not be found to exhibit any actual signs of organic physical disease.

Of course debility apart from this was as common in France as elsewhere, and called for no particular comment, but we soon were forced to recognise this special type, and that for more reasons than one. Of the ordinary cases of debility many showed a definite physical cause. Some were found to have a neglected nephritis, others had early tuberculosis or cardiac disease, some were undoubtedly mental and others neurasthenic, but all these were with ordinary and reasonable care easily recognisable. Those we chose to include in our special

group arrived in a state bordering on collapse, and the only diagnosis we found in any way adequate was to regard them as cases of physical shell-shock, where the cause seemed to have affected the nutritional mechanism and the muscular system in preference to the nervous and mental equipment more commonly deranged. This may seem to many a somewhat fine distinction but it was practically forced on us by frequent and repeated observation and also by the wonderful way in which these men responded to rest and suitable treatment.

And this indeed is the chief point I wish to make with regard to them for there was little about them of special clinical interest, but they did require above all careful and thorough physical examination followed by kindly and sympathetic handling, and the pity was that they seldom received either. It was not uncommonly their fate to be bundled off to some Hospital or Rest Station near the Base where not infrequently being found free from any gross physical lesion, they were looked upon either as slackers or worse and sent straight back to duty or condemned to spend a week or ten days in one of the hated Convalescent Camps, from which in due course they went back to the line quite as bad as when they left it.

Such men it was who were all too frequently responsible for the failure of an important attack, or who when out on night patrol got lost and were captured by the enemy, or who weak and exhausted, with their alertness dulled and their re-action time prolonged, failed to take cover quickly enough in an emergency and were killed, sacrificed by a medical mistake as surely as if they had been religious victims burned upon some prehistoric altar.

The chief characteristics of their affection were weakness, exhaustion, slackness, want of energy, anaemia, impaired digestion and a very distinctive loss of the power of resistance to septic infection, and consequently they were also the men who became the extreme cases of impetigo which were so difficult to cure. They also offered an admirable soil for the growth of any of the infective germs which were always at hand, and repeated observation of the other diseases mentioned convinced us early that the worst cases of Trench Fever and Trench Foot and their septic complications were due, far less to any unusual virulence in the particular germs concerned, than to the reduced general health and feeble power of resistance of the victims when infected. It is also certain that many of the more prolonged forms of obstinate and recurrent pyrexia owed their persistence entirely to the same cause.

The condition was eminently curable and the first essential to recovery was rest not only of body but of mind as well. To secure this it was necessary to get the patients back into some sort of a camp well beyond the reach of long range artillery, and in a position so little conspicuous as to be reasonably immune from night bombing. After that the treatment was easy enough. The system which I have outlined as the routine in our Rest Stations was sufficient to get the men not only fit but willing to return to their work in the line within the space of two or three weeks. Rest, food, and relaxation and amusement were all of value and as a rule drugs were little used although tonics and digestives had their place. Strychnine and Strophanthus were useful in certain cases and Calcium especially in the form of Parrish's Syrup, was certainly helpful as many of the patients were only boys. But the most important feature in their recovery was undoubtedly the personal handling of the men. Discipline was of course necessary and had always to be strict, and there was certainly no room for any mawkish sentimentality which would have been hotly resented by all the men worth saving but there was a vast difference between that and the calculated brutality which was all that many of them ever got except when they had the good

fortune to fall into the hands of people who like ourselves had shared their forward work and were therefore able to appreciate their utter mental weariness and bodily exhaustion, and were willing to afford them the time, the care, and the surroundings in which alone they could find a reasonable chance of recovery.

5. Shell Shock.

The literature relating to this absorbing subject and its mental and neurasthenic allies continues to grow apace, and as some of us believe, out of all proportion to its inherent importance. For this and other reasons it is not my intention to add to it especially since we had a rule but fleeting glimpses of the earlier phases of the complaint as we passed the victims down from the fighting line to the Base.

However, even in a short discussion of the subject it seems to me that there are certain facts which ought to be remembered, for though they are sufficiently obvious, they are not conspicuously apparent in some papers I have read.

a. Before the year 1914,

1. Soldiering was a voluntary career which attracted only those who had some natural bent for fighting.

2. The army was small and picked and trained its men with care, only the fit being retained for service.

3. Even in the most furious battles of other campaigns, the individual soldier counted for something, and had a definite and reasonable chance of survival.

4. Many actions were fought to a finish in one or two days and scarcely any lasted beyond the duration of an ordinary healthy man's endurance.

b. After August 1914.

1. Soldiering was made compulsory, first by inference and later by law. A large part of the whole nation was drafted into the army, and of this part, many would have become mentally defective or insane in the ordinary course of events whether there had been a war or not.

2. Recruiting was rapid, careless and uneven and the medical examination notoriously inept, therefore many men were passed into the army who should never have been there at all. There was not pretence of any test for nervous fitness or mental stability.

3. Fighting in the Great War was on an unprecedented scale and of a severity and duration hitherto undreamt of, and therefore imposed an intolerable strain on an admittedly unfit body of men.

4. High explosives, shells of large calibre, aerial bombing, gas, flammenwerfer, machine guns, trench mortars, the severe exposure, and all the other exaggerated horrors of the war combined to inspire in the men's minds the acme of physical terror, and in addition convinced many of them that they had not even a sporting chance of survival if they were chosen for a leading role in any of the major operations of war.

5. Death on a colossal scale, and mutilation revolting and hideous, became without sufficient preparation, the merest commonplaces of the men's daily life which apart from these was an alternation between the milder relaxations of moderate discomfort and the depths of misery induced by the utmost extremity of mental strain and bodily hardship that the mind of normal man can conceive.

With these basic facts in mind, the mental and nervous devastation which ensued is scarcely remarkable and the following notes are merely the result of reflections on some aspects of the condition which presented themselves to my mind as I watched the cases which passed through our hands in the course of our ordinary work in the field.

A satisfactory classification of these cases is not altogether easy, but they seemed in their early stages to suggest a rough division into two groups;

1. those who had been definitely injured, whose central nervous system had suffered organic physical damage, and

2. those whose nervous and mental symptoms were merely exaggerations or perversions of natural emotions brought on by excessive and unnatural strain, and this latter group also divided itself into two;

(a) cases where the original nervous and mental stability had been sound and good and,

(b) men with a psychological inheritance which was indifferent or bad.

1. In this group must be included men with injuries of such infinite variety of nature and degree that complete enumeration is not possible.

They ranged from shattering wounds of skull or spine by shell fragment or bullet, to the ordinary cases of concussion which might be due to the violence of an explosion, to a blow from a spent fragment or a clod of earth, or what was more common than either, to actual crushing when the victims were buried under the wreckage of a blown-in dug-out.

Most of these must be disregarded here as being chiefly surgical, and even the last named group seldom remained long enough for us to discriminate accurately between pure concussion and an actual lesion such as haemorrhage, for in many such cases pressure symptoms did not develop for several days after the injury. I can recall that many such men after their rescue were able to walk quite well for a day or two, although later on they suffered complete paralysis of their lower limbs from extensive spinal haemorrhage, a point of considerable interest at present in view of the

recent discussion about the condition of the capillary blood vessels in a state of shock.

2. (a) Of those in whom no physical damage could be found, the real Shell-Shock cases, one could write indefinitely, but in this brief sketch only a few illustrations can be given.

The strain of active service was of course felt by every man, particularly if his lot were cast in the forward zone, and few even of those whose inheritance was free from pscopathic taint but were conscious of the abnormal tension that such a life imposed upon their self control. One has only to recall one's first great battle to conjure up visions of how different types of men were affected, first by the excitement and anxiety of preparation, then by the suspense and tedium of waiting, and lastly by the actual ordeal, which though it was to some a relief from intolerable inaction, was to others the realisation and climax of all their worst imaginings and apprehensions.

Space forbids here any analysis of temperaments and dispositions, but I remember spending a good deal of time at this task when I saw the first 'round up' of men who had tried to fight and failed. They were but few in number and had all come back in a sudden access of uncontrollable and compelling fear of wounds and death, some of them to regain their balance and their self-

-pride quickly at the point of a loaded revolver, and others, a small proportion, terrified into physical collapse and uselessness. Some of these too, by careful handling and skilful guidance were able in time to regain their self-control, leaving only a very few to be sent back, broken and valueless for further active fighting.

What is known as "funk" was not uncommon and very infectious, but was generally easily stopped, the chief asset in its control being the personality of the Officers and senior N.C.O's. Fear of death was infrequent, though dread of mutilation, and terror from seeing a friend hideously wounded close by, was often a fertile cause of trouble. "Panic", I saw only once and it was a disconcerting sight, for in it many otherwise normal men seemed to lose all sense of proportion, and had their power of initiative and recovery for the time being completely paralysed. The impression left by these early cases of failure was naturally vivid and though some of the men appeared healthy enough, I soon came to the conclusion that not uncommonly there was a definite physical basis of weariness, debility, or poverty of physique, which accounted at all events in part for their nervous and mental collapse. Real malingering was in my experience uncommon, and much depended on the comradeship and discipline of the unit concerned. The lonely man seldom lasted long, as much perhaps from the traits

which caused his isolation, as from his lack of friends, and in this connection it should be noted, for it was proved by many episodes in the war, that inaction as a cause of Shell-Shock could not be disregarded.

I have often thought that the Officer who suggested leading an attack by kicking a football across "no man's land" so far from being a callous and careless comedian, was probably though perhaps unconsciously, one of the greatest psychological experts that the war ever produced.

Of the Shell-Shock cases which I saw approximating to actual insanity, few presented clinical pictures of great complexity. It was not my fortune to meet any of those who had gone suddenly blind or deaf, or who were so completely inaudible as to be almost dumb. We did see a few with inclinations in these directions but they were mostly classified as either hysteria or malingering, and were treated accordingly with prompt success. Others showed excitement or depression in the usual proportion, and one could not avoid the impression that some of them suffered from not having been handled with sufficient vigour and promptitude when their failure was first observed. Some became the victims of suspicion, persecution, and baseless fears and of these a portion passed rapidly into a completely paranoidal state. Hallucinations of hearing were common in certain groups and mostly remained as intractable as such cases usually are.

Dementia Praecox was encountered also, and I recall especially two such cases which passed through my hands. They were both deserters, but neither of them could be said to show or indeed to have shown any signs of either fear or cowardice. In both cases the desertion seemed to be due to a restless desire to wander, and though both had wandered back instead of forward, both seemed as oblivious to the enormity of their offence and to their personal danger, as they were to those risks and horrors from which they were supposed to have fled. As in all such cases it was a matter of the greatest difficulty to estimate the extent of their conscious responsibility, and we were glad to see that the fighting Officers who disliked these cases as much as we did, were essentially fair and generous in their decisions, and always willing to abide by the reasoned opinions of their medical brethren.

The Army way of dealing with these Shell-Shock cases did not seem to us to be very good. It lacked definition, cohesion and sequence, and at one time it looked as if too many people were trying to give advice and the Authorities were trying to follow them all. One of the decisions, that the forward arbiter for the disposal of all such patients should be determined by rank and not by aptitude or experience, created a good deal of amusement; and it

certainly did not always redound to the benefit of the unfortunate sufferers. Indeed in one instance which we met, their classification and disposal was by this order, taken out of the hands of a man who had had considerable psychological experience, and placed exclusively in those of a dentist who had never practised Medicine in his life.

There was a good deal of fuss too, about the nomenclature of the affection, though how the patients' fate or future could be improved by changing their designation from N.Y.D. Mental to N.Y.D.N. meaning Neurasthenic, we were unfortunately never able to find out. Some of us may however have thought that here and possibly elsewhere the first three letters without any qualification at all, may have kept many a man on ground where he at least enjoyed the safety of long and intimate familiarity.

V. REST STATIONS BEHIND THE LINE.

The various references to Rest Stations, scattered through my pages must serve as sufficient introduction to this section of my story. The need for these depots was obvious from the first, and the necessity for preserving the trained strength of the fighting units from the constant drain of minor wounds and sickness, made them a valuable feature of our work. For the Field Ambulance in charge, they provided if not a holiday, yet a very congenial relief, for the duty though by no means a sinecure, was pleasant both in character and situation, and free from the dangers which most of us were glad enough to escape from for a time. The work too, was well worth doing, for when properly done it was quickly and generously productive of good results. It was recognised as one of the Medical soft jobs though unlike some of these, it was only temporary. Of the more permanent ones we had no experience and little knowledge, though our men on their first march out of the line after their initial ordeal by battle, when on the way to their first rest billets, had unexpectedly encountered signs of two of them, a Barge, and a Hospital Train. These with their personnel living in luxury and housed in comfort, our men tired and dirty, had eyed

with interest but without envy, and though there may have been expressions of mildly contemptuous comparison as they passed, not one of the Field men would have dreamt of exchanging his lot for any such coveted flesh-pots of the Base or the Lines of Communication.

But it must not be imagined that a forward Rest Station was an established entity in which one took over a well-oiled administration and a well equipped place, there to sit down in peaceful indolence while it ran its automatic and appointed course. Such at all events was never our experience and of the three which we had at different times to conduct, one we had to design, equip, and open entirely by ourselves. Of the other two, one had to be so completely re-organised and so largely rebuilt that it also became practically our own creation, while the other was just as wholly revolutionised after our arrival, although the actual buildings in which the patients lived were more or less permanent and had of course existed before we came on the scene.

As examples I mention only two and if their description is more popular than scientific it is still accurate, and though it was written for a different purpose, it may serve to convey an impression of their nature, and of what we did to improve them. Both oddly enough were in the same area and both belonged to the XIth Corps, in fact our arrival in the second one in 1918, after its predecessor had been

lost in the Retreat of the Portuguese, was the direct consequence of our successful efforts in the first one, two long years before.

I. The XIth CORPS REST STATION: MERVILLE:

August to October, 1916.

We arrived to take up our duties in this charming little town on the last day of July 1916, and to say that our new job disappointed us would be to tell less than half the truth. We had just left a series of dressing stations designed and built by ourselves where everything was subordinated to efficiency and the comfort of our patients, and when we had taken stock of what was by courtesy called a "Rest Station", we scarcely knew what to think or say or do. The weather was tropical and the place was certainly not built for heat. It was as surely not constructed for cold weather, and that left us wondering what on earth it had ever been put up for at all, and that was just about as far as we got the first day, but not quite.

It consisted of a large and lofty hall formerly a sort of Gymnasium and Cinema combined, with a good stage at one end. In this hall a large number of the patients slept in rows on the floor and the rest of them slept, or rather suffered from insomnia, in a series of black tarred-felt covered

huts in the garden at the back. There was no air in the hall and there was a shortage in the huts, or there seemed to be, for the patients who lived there were obviously economising in it by using the same lot over and over again for several days at a time. In fact, these huts stank! and therefore our first effort was to remove all the doors and cut out ventilating openings in the walls and this we accomplished before dark on the day of our arrival. Beyond this we did not do much that day but we heard that the floor of a certain office was already strewn with papers full of plans and sketches, and there were ominous groups of carpenters and sanitary men on the prowl all round the place. Of course we realised once again that our predecessors had also been busy and had already vastly improved the place. There was a cookhouse which could not cook, and drains were there which drained not, though these had been very thoroughly overhauled before we arrived after a great deal of literal spade work, but there remained a tremendous amount crying out to be done, and we saw that our timber collecting qualities would be strained to the uttermost. We therefore began our raids at once and as we could now deal direct with Corps, it seemed quite likely that we could play off Corps and Division alternately against each other and wangle

from both with considerable profit to ourselves and so eventually we did.

Two of the greatest curiosities in the place were the Dining Hall and the Ablution House. In the latter, there was a bench with a long water pipe and one or two crazy taps, of which some leaked and the rest did not work, and here over three hundred men were supposed to "ablush". The floor was at least fifteen inches below the level of the ground consequently it did not drain at all, and most of their washing was done in at least two inches of water. For shaving purposes the place contained one broken mirror which was naturally in great request. It was fixed to the wall at such a height that the taller men had to stoop awkwardly while the short ones had to stand permanently on tip-toe or jump at intervals in order to catch fleeting glimpses of a distorted reflection. It may therefore be gathered that shaving was not a popular pastime.

The Dining Hall was an old 'Skittle Alley' close by. The roof leaked and the floor was rotten, and the place stank worse than a tramp-ward on a wet night, so we invited a celebrated Corps Official of high rank to come over to see it, smell it, and help us to repair it. But he, a 'perfectly priceless' individual, with a golden monocle carefully adjusted

in one eye, vainly seeking thus to impart to his vacuous countenance an expression of intelligence, which nothing earthly could have given it, refused to do anything, asserting that in his official and expert opinion it was quite good enough as it was! Thus encouraged, we said no more to him, but gutted and repaired the place ourselves. There was a Bath House too, four tubs or half-barrels in a small shed with a concrete floor, with one entrance and no exit and scarcely room to turn round.

During the day the patients had not been allowed to sit or rest in the large hall as it had to be cleaned and kept clean. We told them they were certainly not to sit in the sleeping huts where the air was so foul, so these wretched men, slunk about the garden seeking shade and shelter which they could not find, and lay down to rest on filthy black cinder paths or on the few rickety seats and deck-chairs that were still able to support them, and waited for their meals. In the afternoons they were allowed out in the town for an hour or two, so that they could sit in stuffy Estaminets and drink bad beer and worse wine and smoke innumerable cigarettes. Such was the rest cure which was to make our sick and wounded and broken men happy and strong, and fit to go back to duty in the line or to be wounded or broken

once more, before being finally thrown aside as of no further service; while Boche prisoners in England were living in comparative luxury, and ignorant, underworked and overpaid Corps Officials in France were calmly asserting that conditions like these were "good enough". There was one other attraction that has been left out. The men were expected to do 'route marches' to keep them fit! Poor devils! No wonder they were as 'fed up' as we were, and no wonder that things began to hum. It should be remembered too, that this was August 1916, that we had already been two years at war, and yet this was all we had to offer our gallant soldiers, broken in health, tired out, and sadly down on their luck.

We therefore set to work without further delay and ceratinly our efforts were supported and encouraged in every way by the Corps Medical Authorities, who were quite as anxious as we were, that the place should be improved. We decided to concentrate first on fresh air, sunlight, games, recreation and amusements of all kinds, baths, a decent wash-house, good food and more of it, with if possible some kind of indoor occupation for all in bad weather, and music and concerts in the evenings.

The whole unit was accordingly divided up into gangs straight-away, and work was begun in all these different directions at once. The cook-house was entirely re-built, more than doubled in size, and completely altered in character. New arrangements were made for the rapid serving of meals, and the Quarter Master quickly collected large stores of extra rations and Medical Comforts to supplement the ordinary diet of the patients. As soon as the dining hall had been repaired we put up a big open air shelter in which the men could rest during the day, and in which those who wished might sleep in the open at night. This was very popular with our own fellows as well as with the patients. The raising of the floor of the washing house was a big job but was soon done, although innumerable fascines had to be fetched from Nouveau Monde twelve miles away, and all the clinker drawn in our own waggons from Annezin near Bethune. We got a little help in this one day when we found a Motor lorry driver who had quenched his thirst so successfully, that he was scarcely able to retain complete control of his vehicle. We very kindly took him in unofficially as a patient for a night or two until he recovered, borrowing his lorry the while so as to save both time and horse-flesh! But after the new floor had been firmly laid and cemented, and sloped so that it was permanently dry, it was found that all the wooden

box-drains in the place were either level or tilted in the wrong direction. We therefore had to re-lay the whole system, putting in brick and concrete manholes every ten yards so that we could shove the dirt through from one to another, by means of a patent drain cleaner made of bamboo fishing rods, purchased locally) and screw-jointed by the M.T. Column; since the general flatness of the ground made any hope of ordinary gravitation drainage quite illusory.

These alterations in the drainage system completed a great work which had been begun by our predecessors, and of which they had done and done well the heavier and more difficult part. It effected a wonderful improvement in the Sanitation of the Rest Station and made life there not only more healthy but much more pleasant, while the new ablution house when finished was a very different proposition to its predecessor. A new exit was opened at the far end so as to allow the stream of men ^{to} run continuously through it in one direction. The water taps were a great difficulty, and we had to go as far afield for them as St. Omer and Hazebrouck, where we scrounged some and bought others in civilian shops, but in the end we got them trebled in number and made them all work properly. The B.R.C.S. supplied us with

mirrors and when we had twenty four of them fixed round the walls at various levels, we ensured that every patient could complete his toilet in comfort and in reasonable time, and that consequently no one had any excuse for slackness in keeping himself as clean and tidy as if he were still in rest-billets with his own unit.

About this time we were asked if we could find room to house the Corps reserve of stretchers, and for the next few days waggons arrived at our front door in a steady stream until we had collected, examined, and sorted, about 600 of these useful articles in every possible stage of disrepair. The 'duds' were sent off to the Corps Ordnance people at Bethune, while the others were distributed to the patients, and on these for the rest of our time, they slept much more comfortably than they had previously done on the floor. We then gave the Hall a very thorough spring cleaning from floor to ceiling and distempered and painted the whole place, many of the patients lending a willing hand, and this done we converted it in to a sort of big play-room, replete with small tables, chairs, rugs, and games of every kind. These also were supplied by the B.R.C.S. from their depot at St. Omer.

The Quarter Master was at this time as happy as he could be. He was busy from early morning till late at night visiting every dump from which he thought he could extract any sort of addition to his stock in trade. His stores were more than doubled in size and were soon stacked to the ceiling with new clothing and new kit for all ranks and every branch of the service, and with everything that could in any way make for health and happiness. He paraded all the men before their discharge and re-equipped them in every detail before they re-joined their units.

Our next effort was the bath-house, which was extended and reconstructed on more modern lines, with a clothing store and ironing room attached. When finished it contained five full sized baths and eight tubs with rose-sprays above them, and a new boiler was improvised which greatly facilitated the supply of hot water. In designing this establishment we remembered and made use of one practical detail which we had discovered for ourselves which was to make the drying and dressing room at least four times as large as the undressing room and this enabled us to bathe quickly a very large number of men in a steady and unbroken stream. When this was finished we were still handicapped by having to carry all the cold water to the boiler from one small tap which was invariably leaking and was always surrounded by a horrible puddle; so, after collecting as many iron

pipes, 'elbows' and 'T' pieces as we could find, we installed a complete water system throughout the camp, the whole of the work being done by our own men.

This done we took in hand as usual the actual sanitary appliances, and having cleared out the existing system, we here again as at La Gorgue introduced our own private pattern of quick burning or "every man his own Incinerater"; and never did the scheme work better, and never was it a greater boon than in this crowded institution, in the heat of a scorching summer.

During the hot weather, life in the camp and indeed in the town became almost insupportable, and we therefore decided to get all the patients out into the country as frequently as possible, and in this way began our famous all-day picnics, which were attended by practically everybody in the place.

Those who were fit walked, and the others were taken out in motor ambulances, horse-ambulances, and even at times in G.S. waggons. The first of these outings was held in a field near one of our old billets at Le Vertbois farm much to the delight of all our old French acquaintances in that district. The cooks went off early in the day with a complete out-fit of boilers, stoves, and other appliances, and a very generous supply of rations and extras, and provided hot dinners, and 'buck' teas on the same lavish scale

which was the routine in the Rest Station, and the Q.M.'s especial boast.

These outings were greatly enjoyed by all the patients and in the afternoons we organised for them games and sports of every kind. Football, cricket, badminton, quoits, etc, went on in various parts of the field while the centre was kept clear for an improvised race-track, the programme being generally concluded by an obstacle race and the inevitable tug-of-war. Everybody seemed to enjoy themselves and certainly all ranks, patients and staff alike, worked hard to make them the success they undoubtedly became.

A games committee which was set up among the patients took most of the arrangements in hand thereby providing interest, occupation, and variety to a great many in the intervals, and in a very short time we got evidence of the new spirit which prevailed among these grateful men. At first there had always been some trouble with fellows missing roll call or cutting sick parades, hiding, slacking about, and trying to stay on too long in the place so as to avoid going back to their units. Now it was no uncommon thing for men to report voluntarily to the Officers and say, "I'm ready to go back to duty; I've had a jolly good time for a fortnight and I would like to make room for some of my pals who are quite as seedy as I

was when I came in". This was exactly what we were after and when it happened we felt amply repaid for all our work and trouble. These picnics besides providing fertile sources of conversation and discussion were also provocative of any amount of fun, of which many intensely amusing instances could be recorded.

It has been mentioned that one great difficulty with which we had to contend at the big Rest Station, was the large hall. We found it very hard to keep the place clean, largely because it was the main and in fact the only avenue for all traffic from the street to the administrative part of the Institution. Consequently all the rations and supplies of every kind had to be carted through the hall to the Q.M.'s department, and these included not only our own necessities, but all those for our various outlying dependencies as well. This was a great nuisance and a fertile source of dirt, and we had been wondering how it could be avoided, ultimately we fitted up the empty garage at our Officers' Rest Hospital nearby as an extra Quarter Master's dump and arranged that all our stuff should be divided up and dispatched from there. This proved to be much easier and more expeditious and also a very considerable saving of traffic through, and consequently of dirt in our newly decorated hall.

To celebrate this alteration we manufactured a carpet for the hall floor. It was made out of some open weave cocoanut matting which our R.E. friends had found somewhere and which, having no use for it themselves, they gave us quite willingly!.

The stage was almost entirely taken up by the racks which had transformed it into a Pack Store, but it did not take us long to re-arrange them so as to set free most of the available space for other purposes, and after making a new drop curtain for the front we were able to start a series of at first impromptu concerts, and later on, other more ambitious and more elaborate entertainments, which soon began to follow each other in quick succession.

We eventually re-painted the whole of the proscenium to harmonise with the improvements in the hall, and the general effect was extremely good.

It was here too, that we first embodied our Concert Party and made it a regular Pierrot Troupe, and here in a very short time its performances reached a pitch of excellence which surprised many of our visitors and friends. This entailed a great deal of very hard work but as it was all looked upon by those concerned as a form of recreation, and was carried out with great spirit and the utmost goodwill,

its success was assured from the first. Many of their entertainments were so good that they attracted nearly all the local celebrities in addition to the patients for whom they were provided, and before long we were honoured by a visit from the Corps Commander and his Staff at a special concert which they appeared to enjoy most thoroughly, afterwards expressing their satisfaction and delight in the most enthusiastic terms.

The Rest Station soon became famous and was freely copied by other units engaged on similar duties. The Corps Authorities were lavish in their thanks and approbation and we learned from many of the men who had been in both, how much they preferred our place and system to the cruel and hated rest camps at the coast. Most of these had a very bad name, chiefly we believe, because they were controlled and officered largely by people who had never been in the line, and were consequently ignorant of the conditions under which the men habitually lived, and therefore unable or unwilling to appreciate or sympathise with either their point of view or their state of mind. Many of the reports we heard were no doubt biassed and unfair but they were curiously consistent and they all agreed in substance. The impression made upon the men was that they were all being looked upon as

shirkers and malingerers, a hard thing for soldiers to bear from anyone, and insupportable when it came from those who had never even from curiosity, attempted to share their anxieties or their dangers.

2. THE XIth CORPS REST STATION: LIGNE.

June - July. 1918.

Early in June 1918 after the great German attacks against the British Front had been fought to a standstill and the line once more stabilised, the XIth Corps began again to set their house in order. Owing to the precipitate flight of their Portuguese Contingent they had lost the town of Merville and the surrounding country to a depth of about ten miles, consequently a new Rest Station was necessary. Their D.D.M.S. was not over-burdened with tact and his methods were neither sympathetic nor successful, so it was not surprising that after about five weeks when all the three Field Ambulances of a regular Division had successively tried and failed, the Corps Commander interfered and ordered us to move into the new Rest Station at once and set the place straight. Our instructions reached us from "Q" Corps through Divisional "Q" direct, ignoring the Medical Authorities altogether, thus giving us a hint that

we would have a free hand, a position of independence of which we were not slow to take full advantage.

We could not help being sorry for our predecessors for we knew quite well that their failure was largely due to the nerveless indecision and fatuous interference of a superior whom they simply did not dare to ignore, though we were equally aware that his views and querulousness would never affect us in the slightest degree, and if we welcomed the chance of a job which we felt was well within our powers, so also did we jump at this opportunity of a rest after the very weary and harrassing time we had recently had during the two great enemy attacks.

We reached the Rest Station on the 17th of June about noon and had begun its reconstruction before two o'clock the same afternoon. Everyone in the unit was at his best. All were on their mettle and as a result, the re-building and re-organisation of the Rest Station went ahead with a rush from the first hour. Our previous experience of similar institutions made the early changes here seem simple enough. All the old cries of two years before were just as insistent now, and all were as promptly attended to, the first thing we tackled being the food and its cooking. The actual rations and all pertaining to them we left as usual in the

hands of our Quarter Master, and more need not be said. He dealt with his accustomed and familiarity in foodstuffs of every kind, and as if by magic extra supplies and large reserves of Medical Comforts of all kinds rapidly came to hand. For with his usual speed and bonhomie he tapped every likely and unlikely source till he induced Division, Corps, and even Army Supply Officers of every rank and degree to contribute their quota to the common stock, so that before many days had passed, he had acquired a dump of stores which would have been the envy of any A.S.C. Officer in the field, if he had been allowed to see it.

The so-called kitchen was a large and well constructed place but its size was entirely wasted by nearly the whole of the floor space being taken up by two enormous combined dixey fires and ovens of prehistoric design, built by the Corps Engineers so as to consume the maximum amount of fuel and produce absolutely no result. Accordingly one of our first duties was to push the whole contraption out into the road and to make shift for one day at least with an ordinary trench fire and our own portable stove. That night, having selected some of the best of the new dismantled ovens, we hurriedly built them into fresh positions separately, all the work

being done willingly and cheerfully by two or three bricklayers from among the patients and one or two of our own men expert from long experience at this particular job. A few days later we induced a Heavy Ordnance workshop to make us an extra large oven in return for some sheet iron which they wanted badly, and which we had stolen from a forgotten and abandoned store in the town of Aire, and when this too had been erected, we had a model cookhouse capable of cooking amply and well for over a thousand men, and doing it all too, on less than a quarter of the fuel which had hitherto been consumed in a vain endeavour to cook anything for anybody. We then altered, rebuilt, and floored with concrete all the kitchen surroundings and roofed them in so that they could accommodate the Quarter Master's Stores which up till then had been over half a mile away, and by including in the plan a large carving room with a wide serving hatch, we ensured that all the patients could be quickly served with meals both fresh and hot. We also at the same time doubled the capacity of the Dining Hall by halving the width of the tables and forms, and by carefully supervising the way in which the patients took their places we managed to keep a continuous stream going through the Hall all the time, so that every man had his meals in comfort there, abolishing for good the unsavoury and unsightly pic-nics which had formerly been a great vogue on the surrounding grass.

After this it did not take long to add shoots for the dirty plates and a washing-up shed with a fixed hot water supply at the far end of the Dining Hall which saved endless labour and greatly reduced the wastage of our scanty crockery. The third day of our occupation saw most of our new methods in use and the feeding arrangements were carefully rehearsed under my own supervision. A few remarks were at the same time made to the patients explaining what we intended to do for them and how everything depended on their behaviour in the camp. They quickly saw that our discipline would be strict but kindly and that we were much too keen about our own job to want to be bothered by irksome restrictions and police duties of any kind, and that therefore it was up to them to show that these were unnecessary, which they did.

Here as elsewhere we found that if we treated the men decently and straight, neither bullying them nor slobbering over them, but remembering with a little sympathy and personal interest what they had been through and what awaited them in the future, there was never any difficulty in getting them to conduct themselves like the gentlemen they were.

Nor were their recreations neglected, for very soon a proper football pitch was marked out and a matting cricket practice net arranged in the centre of the camp. A badminton court followed

with reading and writing and games all supplied for the asking by the B.R.C.S. stores, and finally we took over a large sports field about half a mile from the camp where the most delightful afternoon sports and pic-nics were held two or three times a week. Bands were invited out from the Divisions in the neighbourhood and evening concerts and entertainments both by our own troupe and by the patients and various of our friends helped to keep even the most jaded from wearying, and a few days after all these were in full swing, I was fortunate enough to meet by accident on the road side, a travelling Cinema show on its way to First Army Head Quarters, and having persuaded the men in charge to come and live with us for a few days, we were able to provide two and even three performances each day to assist these unfortunate men to forget all their troubles and anxieties in a manner as popular as it was unexpected.

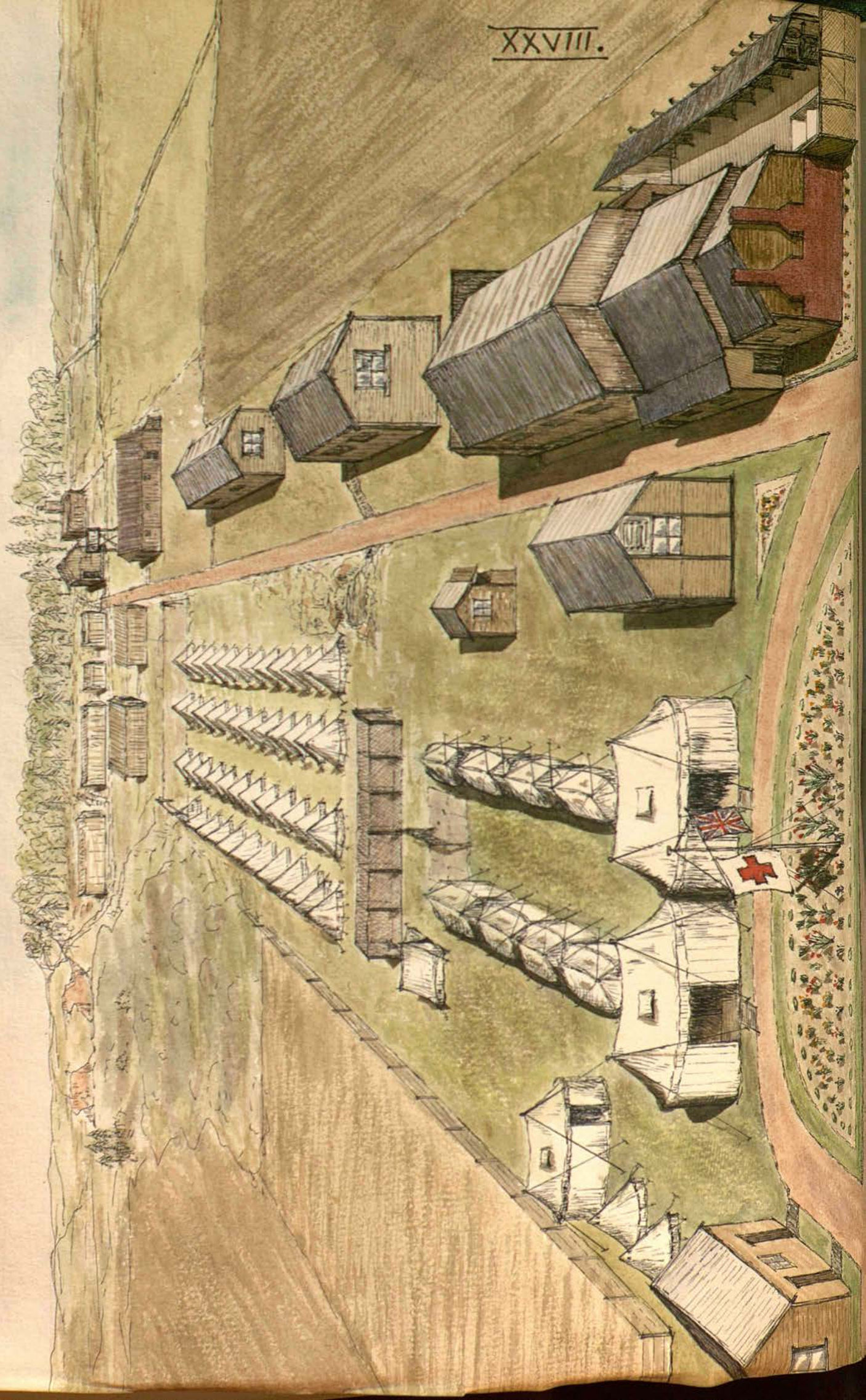
All these various enterprises made as might be expected for health and contentment and so did the meals which were a never failing topic of conversation. Never since they had been in the army had any of them seen such feeding and after the kitchen was finished scarcely one man left the dining hall without having had to undo his 'top button' and a fat and comfortable smile of repletion

and content became the property of all.

Building went on at an alarming rate.

New ablution houses and sanitary conveniences took the place of the flimsy structures that they replaced, fresh incinerators which ensured a plentiful supply of hot water were soon put up and greatest help of all, we succeeded with the help of one of the Corps plumbers in installing a complete gravitation water supply throughout the whole camp. Timber was scarcer than ever but by this time we had constructed a small circular saw, and having found a derelict petrol engine in one of the ruined villages near the front we soon had our own saw-mill going and were able to double the length of all our heavy wood by halving its width. We also built a large bath house which was a great boon to all the men, for up till then facilities for thorough washing had been very insufficient.

Here we spent several very happy weeks and when our Division again recalled us for sterner work in the line, we were able to hand over to our successors an establishment as nearly perfect as the best of our efforts could make it. The Corps Commander took a keen interest in all our doings and when we left sent us a message of congratulation and thanks through our Divisional Staff couched in such generous terms that we became the centre of much envious and though appreciative comment in these



friendly but exalted circles. A sketch and plan of the place as it was when we left, are attached.

(PLATE XXVIII.).

VI. FIELD SANITATION.

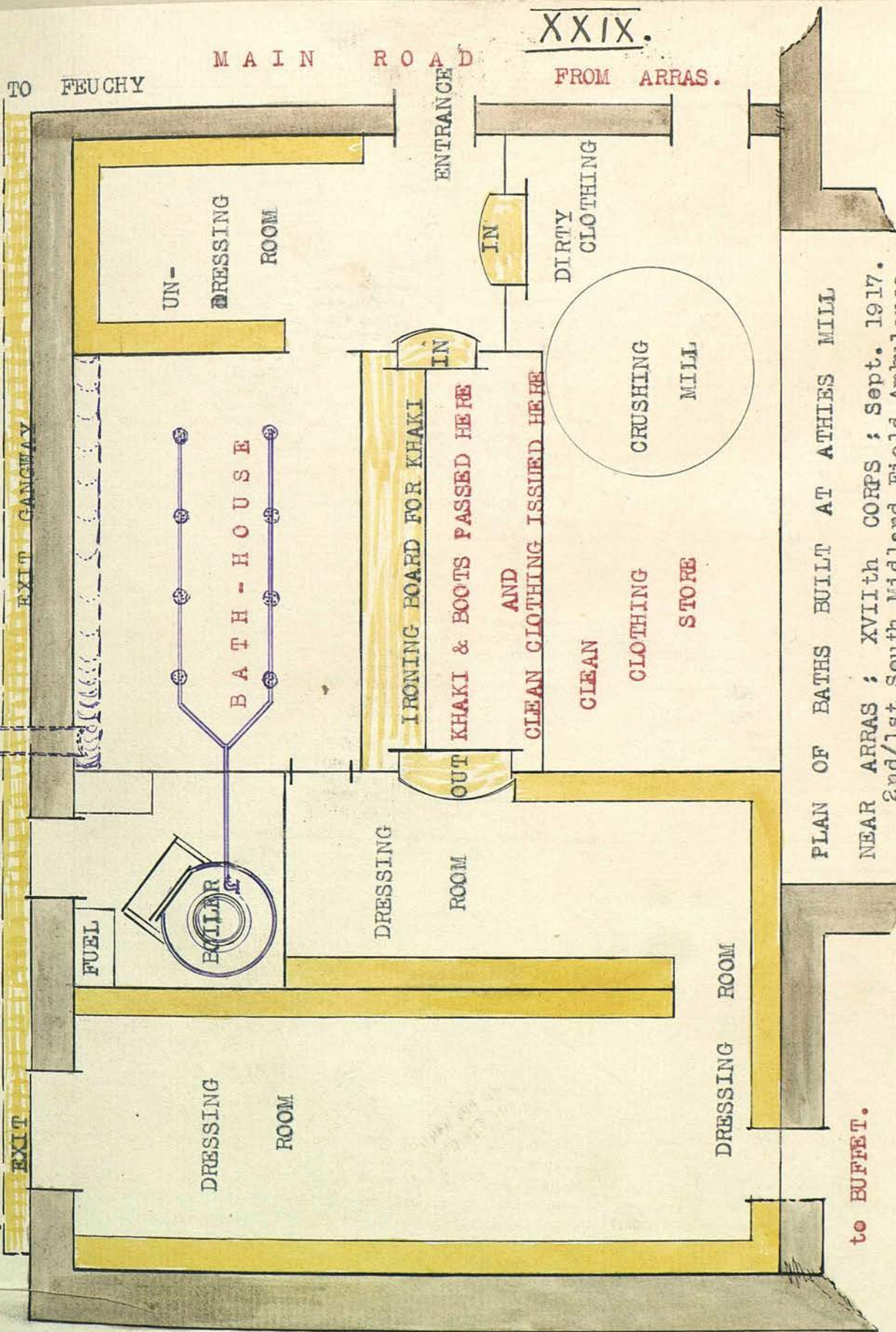
It is not my intention in this section to discuss exhaustively the several questions comprised in any survey, however brief, of the whole subject of Sanitation in the field. This would of necessity involve a wearisome enumeration of much that is so obvious and familiar that it may be reasonably taken for granted.

Under this heading therefore, I shall merely illustrate a few of our own original methods and ideas, as examples of that spirit of improvisation which was so essential in the field in the absence of any routine guidance, and which proved of such untold value in many different ways during the great national emergency.

1. Baths;

As has already been hinted the bodily cleanliness of the soldier was a constant anxiety, and the methods of securing it were innumerable. It was as a rule not difficult for those in permanent or semi-permanent camps to arrange something both serviceable and workable, but the problem was much more difficult in the case of mobile units who were constantly moving to fresh areas, and were seldom left long in any one place. Nests of metal baths with a suitable boiler were indeed supplied by one voluntary organisation at home and these were often useful, but

DRAIN SCARPE CANAL



XXIX.

MAIN ROAD

FROM ARRAS.

TO FEUCHY

ENTRANCE

UN-DRESSING ROOM

BATH-HOUSE

IRONING BOARD FOR KHAKI

KHAKI & BOOTS PASSED HERE

CLEAN CLOTHING ISSUED HERE

CLEAN

CLOTHING

STORE

CRUSHING MILL

IN

DIRTY CLOTHING

DRESSING ROOM

ROOM

DRESSING ROOM

ROOM

DRESSING ROOM

to BUFFET.

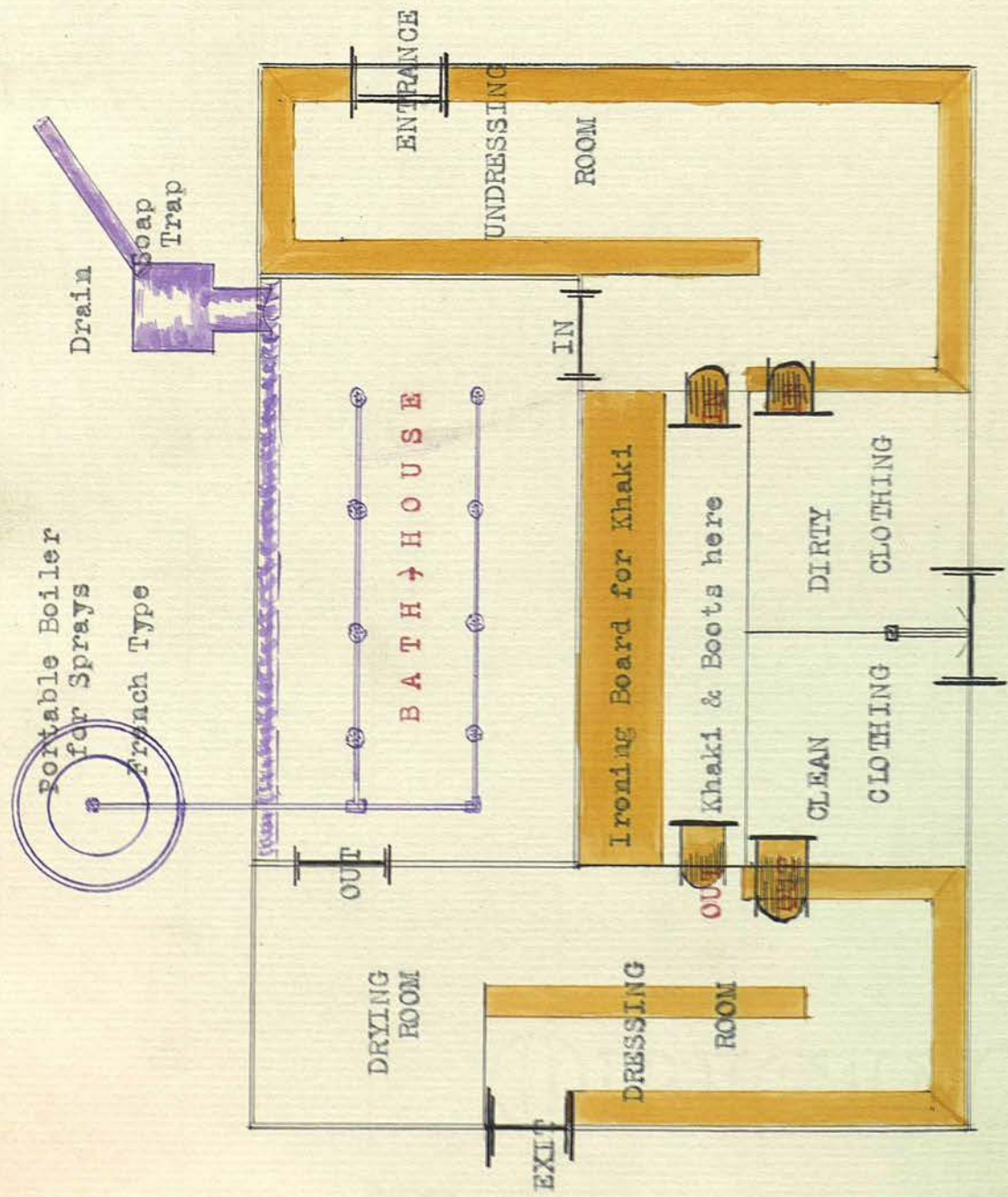
PLAN OF BATHS BUILT AT ATHIES MILL
NEAR ARRAS ; XVIIth CORPS ; Sept. 1917.
2nd/1st South Midland Field Ambulance.

their transport was difficult, and being light and fragile they suffered a good deal from constant moving.

Gradually however the authorities began to supply boilers with sets of rose-sprays which were of two kinds, first the French type very lightly built and easily portable, and later a heavier and more solidly constructed English boiler with similar spray attachments, much less portable but excellent when fitted up, and both of these we used on several occasions. They required for their accommodation the building of some sort of bath-house or the adaptation of some existing building to serve the same purpose, and at both of these enterprises our men became exceedingly expert. Diagrams of two such buildings are attached, which are accurate plans of places we actually built and used.

The first, (PLATE ~~XXIX~~) shows a bath-house built by us near Arras within three kilometres of the front line. At that time, in the autumn of 1917, we had excellent baths in Arras itself for all the men of our Division, but one of the Brigade Commanders rightly considered these much too far back for regular use by the men in the line whose bathing was indeed much more important than that of their comrades in

XXX.



SKETCH PLAN OF ORDINARY 8 SPRAY BATH-HOUSE

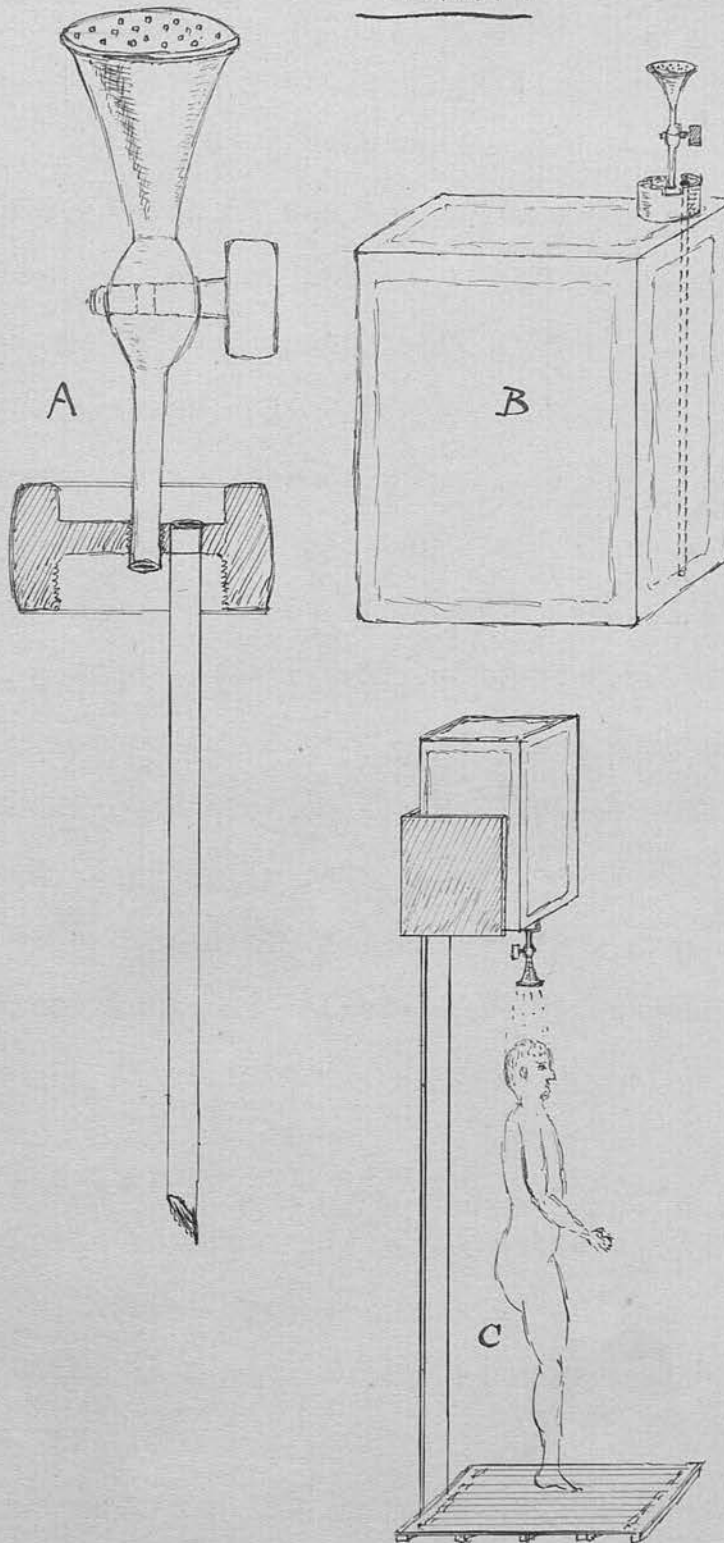
2nd/1st South Midland Field Ambulance; Xth CORPS Rest Station.
LIGNE, July 1918.

reserve. We therefore selected as a possible site, the ruins of a badly damaged sugar factory at Athies on the Scarpe, and after it had been condemned as utterly unsuitable by the R.E's, we took the work in hand ourselves, and completed within eight days, what was subsequently considered one of the finest forward bath-houses on the whole front. In this as in all the others we designed, stores were arranged with suitable hatches for collecting the dirty clothing and issuing the clean, and while the men were in the bath, their khaki was passed through a special passage in which it was treated for lice and ironed by our own men. The dressing room was as usual made much larger than the undressing room, and a simple system of metal checks of different shapes guaranteed that each individual collected only his own clothing without mistake and with the minimum of delay.

The Lander Bath:

But there were many places and occasions in which such an arrangement as this was impossible, and yet bathing was just as necessary and to meet these emergencies we improvised various simple methods which finally culminated in the design by one of our Officers of a portable spray bath made from an inverted petrol tin. The brass cap was pierced by eight or ten small holes to form the spray, with a larger central one as an air inlet to which was attached a copper tube

XXXXT.



Diagrammatic Sketch of the "LANDER" Bath

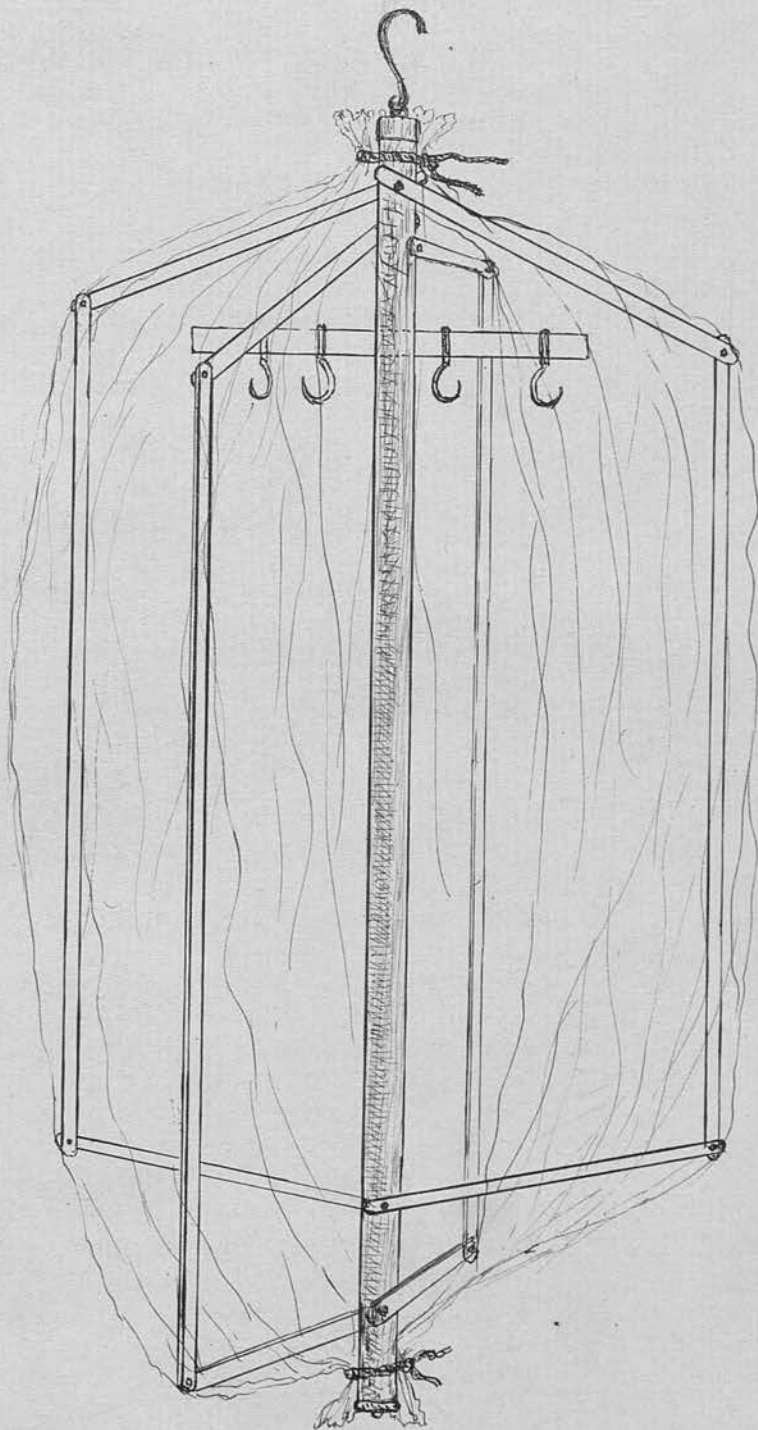
- A. Brass Rose with tap and Air inlet pipe fixed to brass cap of ordinary petrol tin.
- B. Sketch of tin ready for use.
- C. Method of use.

reaching to the bottom of the tin. This was eventually elaborated by us and fitted with a tap and a proper rose, after which it was in constant use by most of the people in our Division. It was always a simple matter to fill the petrol tin with hot water and when it was inverted and suspended in half a wooden shell box over the bather's head, it gave him quite a reasonable chance of getting his body thoroughly washed. This could be carried out by one or two individuals at a time in ^abell tent or small hut, or could be multiplied to any extent that was convenient, the bathers standing on slatted boards covered with matting, and the soapy water being conveyed to a suitable soap trap, by a drain improvised from sheets of corrugated iron suitably disposed. Illustrations of this method are also attached. (PLATE XXXI.)

2. FOOD: Its Storage and Cooking.

Of all the triumphs of organisation by which the field army benefited none was greater or more complete than that which ensured the safe arrival of its daily food, but into the intricacies of that great task, and the minor difficulties attending the final distribution of preserved and frozen meats, it is beyond my present purpose to enter.

XXX //.



Diagrammatic Sketch of our portable folding
MEAT SAFE.

Wooden slats jointed by bolts and nuts fixed
to an old tent pole, and covered with a muslin bag tied
top and bottom.

The two chief points of interest to us were the storage and cooking of perishable articles of food. Meat safes were essential always and were improvised in different shapes by nearly everybody, the one great advantage constantly desired and usually sought for in vain, being again portability. An illustration of our particular type is given (PLATE XXXII.) and explains itself. This we made in every possible size, from the largest for the Head Quarters for a unit like our own, down to the smallest which was desired for the Officers' Mess of an ordinary Infantry Company in the line. After we had brought it into use it was copied by nearly everybody who saw it, and our own carpenters were soon extremely tired of duplicating it for our less resourceful neighbours and friends. It had the great merit of complete simplicity and was the only one we saw which was completely fly proof. The surrounding muslin bag was at first rather hard to find but the material was soon made available in quantity, and had the supreme advantage of being easily washable.

Cooking:

For the Infantry Battalions who formed the bulk of our troops the cooking was nearly all carried out in the regulation army field-cooker of which they were the fortunate possessors, but which was

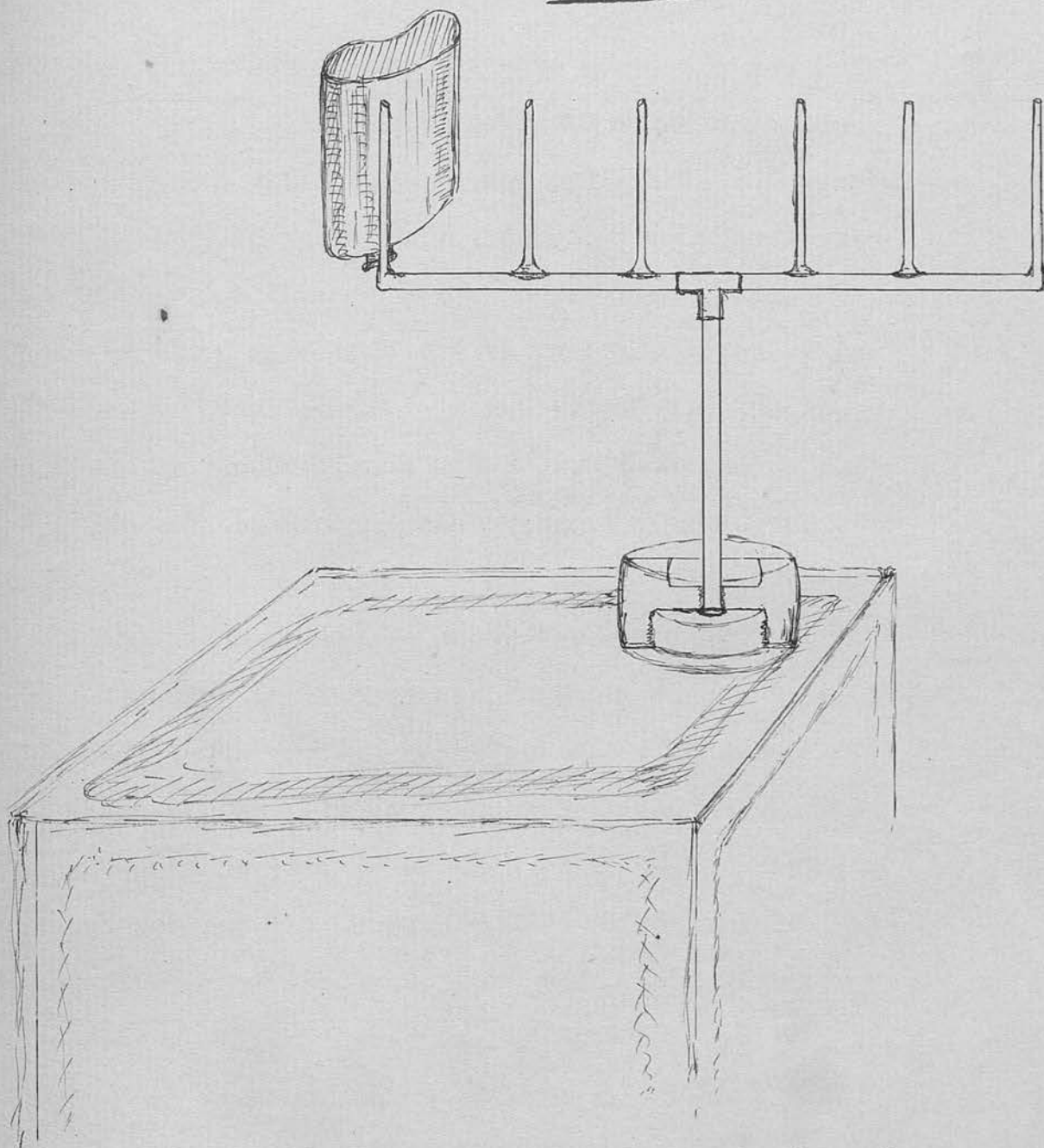
most fortunately not supplied to anyone else, so that Field Ambulances, Field Companies R.E., R.A.S.C. Companies, Brigade Head Quarters, and many other small bodies of troops were wholly dependent on their own initiative for rendering their daily food fit for consumption. The usual solution of the difficulty was to make a general stew, "Pontoon" as it was called, in a Soyer stove stolen from some wayside camp, but to feed men every day on such a concoction boiled in the same receptacle in which they also made their tea, was to condemn them to the dull monotony of a routine so dubious that it soon became intolerable. It also failed to give them a diet which did justice to the excellence of the rations provided for their nourishment. Hence field ovens were improvised from almost anything, and most of our men could roast a joint of meat efficiently in an old biscuit box or cresol drum converted into an oven, fired by derelict timber, the flues being made from scraps of old iron supporting dried mud.

At our own Head Quarters we had a portable stove which we bought in England and by means of which we saved many a difficult situation, but if we were left for even a day or two in any one place we added to our other resources of open dixie fires, and Soyer and other stoves, fixed ovens of the type

which has already been described, and is illustrated for another purpose on (PLATES XXV, p. 114.).

This which was known as the "First Army" pattern oven was the simplest and best contrivance of its kind which we met, and when built in our way as it could be in an hour, and fitted with our hot plate above, it afforded us and our patients all the conveniences and advantages of an up to date kitchen range.

XXXIII,



Rough Diagrammatic Sketch Plan of a
Simple pipe fitting screwed into the brass cap
of an ordinary Petrol tin, used for sterilising the men's
Water Bottles by means of steam.

3. WATER.

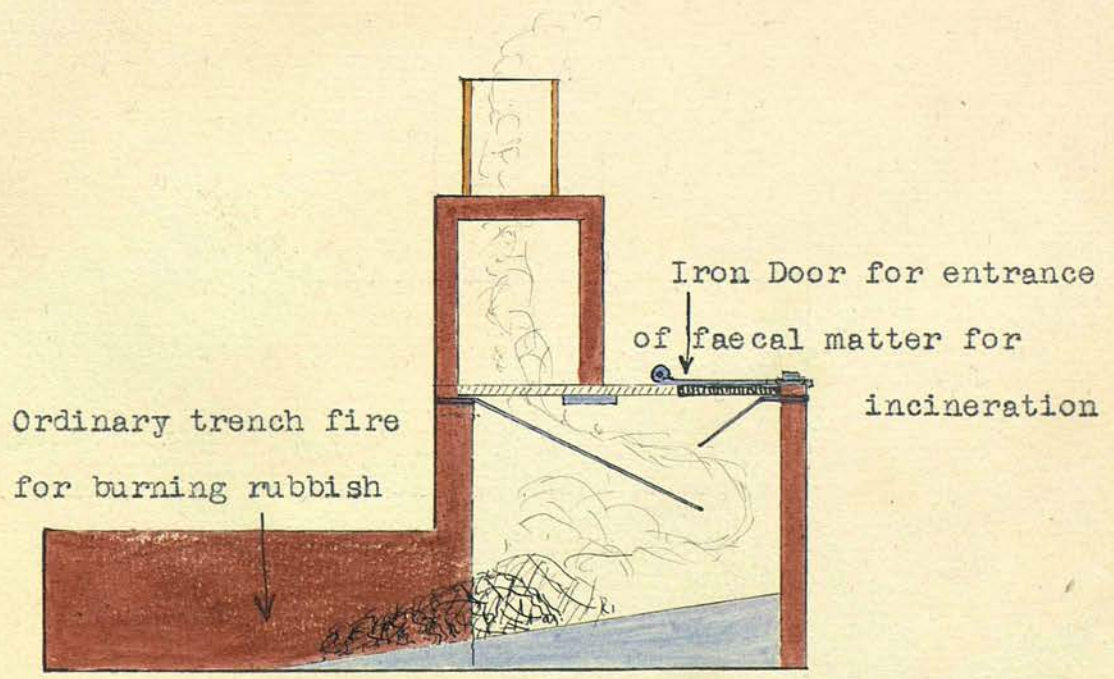
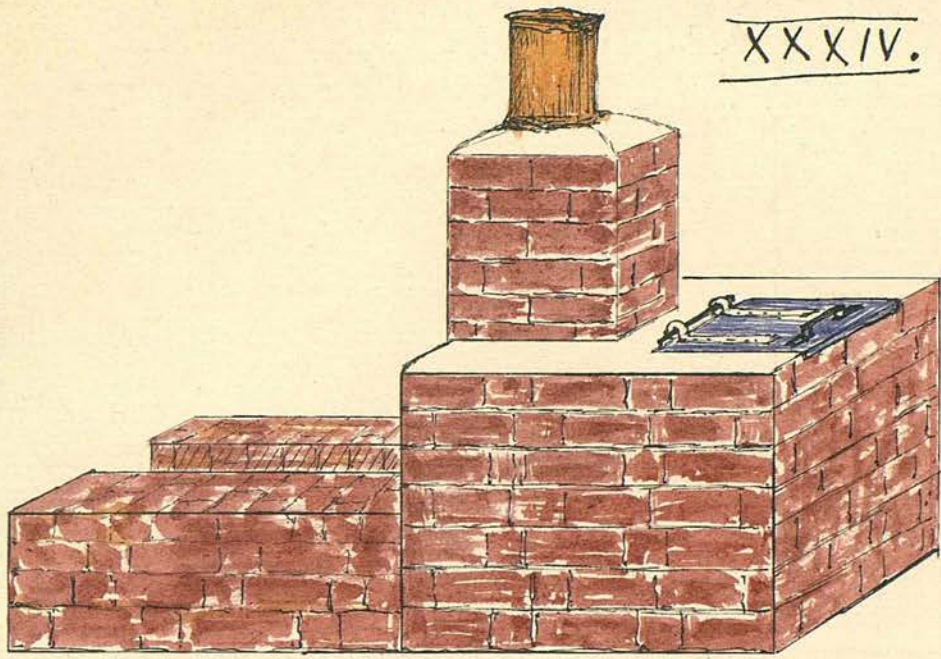
The arrangements made for supplying reliable drinking water to the Army in France were admirable. The regulation water cart worked splendidly all through the campaign and was eventually made even more simple in construction than it was when war broke out.

Water problems were thus few in number and simple of solution. When possible, fixed water supplies were arranged by the Engineers under expert direction and control, and the most minute precautions were taken to prevent the dissemination of any water borne disease. The equipment supplied to units for water testing and for estimating the amount of Bleaching Powder necessary to purify their various supplies, was simple and efficient and we were constantly proving the value of both, though never more so than when in following the Germans through the territory they devastated in their great retreat of March 1917, we found that most of the wells on which the advancing Infantry had to depend, had been contaminated with all kinds of filth, while others had been actually poisoned.

The water carts and the men's water bottles were on the whole well looked after, though sometimes it was difficult to get sufficient boiling water to scald them out frequently enough, and we finally introduced a small appliance figured on (PLATE XXXIII.), which ensured that our own men's bottles at least were above suspicion.

This as will be seen required another unofficial misuse of the precious and ubiquitous petrol tin, but we found it a very valuable addition to our armamentarium. This simple fixture was made by our own men and with it there was little difficulty in raising sufficient steam on an ordinary fire to sterilise a large number of bottles in a very short time

XXXIV.



Rough Sketch and side elevation of our
Incinerator in which each man burned his own
Excrement.

4. Refuse and its Destruction:

An early experience in France convinced that of the two chief methods of rubbish destruction then in vogue, namely burning and burying, only the former was really safe. At that time there was a craze in certain circles for laying out so-called ornate paths, by packing empty food tins full of mud and arranging them upside down so that they presented a hard well supported metallic surface, and by the mosaic-like arrangement of their various shapes a certain symmetry which was much admired by some. Apparently however, the enthusiasts who had preceded us in one place, had failed to empty all their tins and burn them, and indeed in haste to complete their popular designs had not scupled to use others from which the precious "bully" had not even been extracted. The result was of course disastrous and our search for the cause of the resulting stench decided us to concentrate whole-heartedly on incineration.

Incinerators were of course omnipresent in France and as most units seemed to build them to their own design, we conformed to custom and after many trials evolved one of our own which we like our neighbours considered perfect. A rough sketch and sectional plan are attached (PLATE XXXIV.). It had several advantages, and was useful in that it could burn

efficiently refuse of every kind. The open trench end was devoted to burning all the camp rubbish, and as will be readily be understood from the plan, the heat generated by its consumption served to keep the interior at such a high temperature that the baffle plate in the centre was almost always red hot.

In the next section it will be found that we incinerated all our latrine excrement, and this could be done without offence through the other side of this incinerator. The flat door was raised, the material shot in on to the hot plate, whose intense heat ensured such rapid and complete destruction of the feculent matter that it was all volatilised with practically no smell.

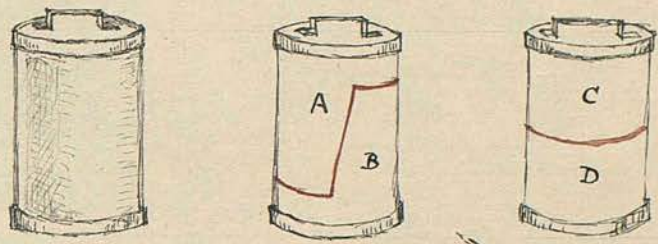
We also generally had the trench end covered with large metal tanks filled with water, and from these we could nearly always guarantee a constant supply of hot water, a thing of great importance in the camp, no matter what our special duty was at the moment. It will be apparent too, that the structure was very easily built, the only difficulty being the central chimney which was the secret of its success, and had to be supported on one side by an iron rod resting on the brick work. The sloping floor made of rough concrete and the baffle plate made of any old iron found lying about were easily arranged,

and even when our materials were of the roughest and most scanty description, we seldom had much trouble in making certain that all our waste of every kind was promptly and efficiently destroyed.

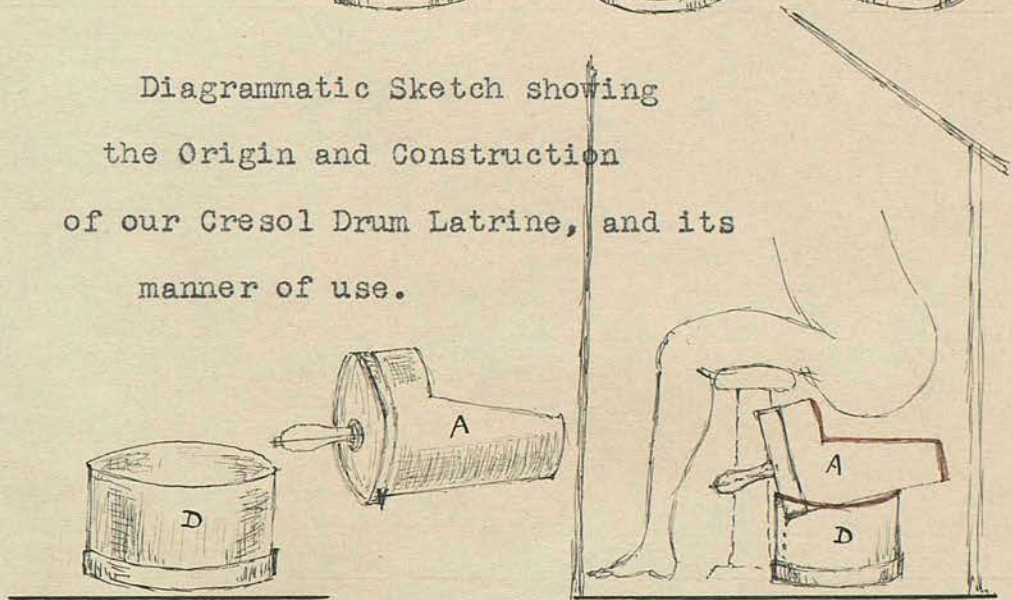
5. Latrines:

Like incinerators, field latrines were of every conceivable pattern. Bits and boxes of all shapes and sizes were in constant use and here again we used and tried every known and unknown kind. In Merville in the Summer of 1916 however, the urgent needs of the large number of patients in the Rest Station as well as of our own men, made burial with its inevitable demand for fresh ground an impossibility. We therefore decided on incineration and after much thought and many attempts, hints from other units and many trials, we again succeeded in designing one of our own which we used exclusively during the rest of our stay in France when we had the necessary time to fix it up. Its construction will be evident from the attached sketches (PLATE XXXV).

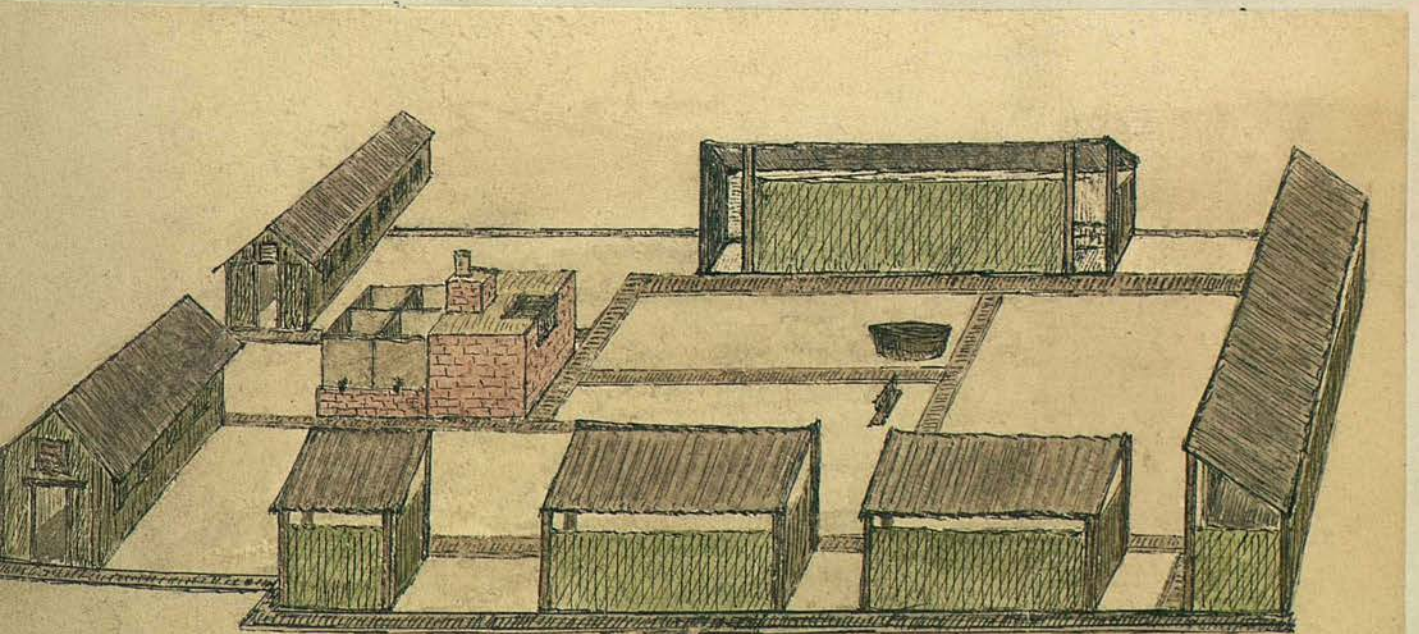
The rough material of each separate unit consisted of parts of two Cresol drums which fortunately for us were plentiful and were made of strong tough metal. One of thees was cut to form two shovels of special pattern like coal scoops, while the other was halved horizontally to make two cylindrical receptacles.



Diagrammatic Sketch showing
the Origin and Construction
of our Cresol Drum Latrine, and its
manner of use.



Rough Sketch Plan showing our arrangement of
Latrines, Incinerator, hot water tanks, Wash and
Bath houses in any of our fixed camps behind the line.



The scoop when fitted with a wooden handle fastened on by a bolt and nut, was pierced at its front lower point, in order to allow the urine to run away into the receiver upon which it rested, so that this arrangement provided what was most essential for burning, namely a dry excrement. Each man before sitting down placed in his scoop a large piece of old newspaper and a handful of sawdust in which to evacuate, and when finished walked straight on to the incinerator, opened the lid and allowed the whole thing paper and all, to fall straight on to the baffle plate with the minimum of trouble. In most cases the scoop was not even soiled but if it were, he laid it down in a large bucket of Cresol solution close by, and replaced it by a clean one from the drying rack. The urine was collected every four or six hours from the under tins which also contained some Cresol, and was got rid of in the ordinary covered urine pit where it sank quickly into the specially broken up soil.

The result of all this was that even in the driest and hottest weather there was never a fly to be seen in our latrines at any hour of the day or night,,and it was seldom difficult to get men of any type to take sufficient interest in the system to guarantee its complete success. If any man did fail to incinerate his deposit, he was compelled to remain in the latrines on picquet duty until he found some one else who had likewise failed, when he could pass

the duty on to him. This worked very well indeed and except for the expert work of our sanitary Corporal whose duty it was to see that the soiled scoops were washed clean and hung up to dry, the place went on without supervision, and it can be easily understood what a boon this method proved to be in a camp of from 1500 to 2000 men.

Separate places were of course built for patients and staff and for the various ranks, for everybody had to conform to the rule and we always had isolation places for scabious and other infected people, but all were of the same type and we found it convenient always to arrange them in what we called our "Sanitary Square". And the fact that the incinerator provided us with our hot water also led us to complete the square by the ablution house for the men, and the shed where all greasy dishes, plates and mess-tins were likewise washed and cleaned. A rough diagrammatic sketch showing our invariable arrangement will be found on (PLATE).

VII. SUMMARY AND CONCLUSION.

If it is a fact that few people foresaw the Great War as a possibility, it is equally certain that in its early days still fewer were able to form even an approximate estimate of its ultimate extent. And when the passage of time had brought us to the end of its second year, many of us in France who were accustomed to consider the position seriously, were more than ever amazed at the apparently light-hearted nonchalance which seemed to pervade the minds of many of those in high Command.

To us this was evidenced chiefly by their habitual temporary and makeshift methods. It was unnecessary, so we were told, to do much permanent work behind the line as the British Army was always just on the point of 'breaking through' or at all events, of making a big advance. Even their repeated gigantic attempts and their just as splendid failures did not seem to suggest to their minds any change of tactics, and from the psychological point of view, it was almost pathetic to observe the perfect and child-like faith of the forward fighting men in the wisdom and ability of their leaders at the back.

It is true that pessimism among those in authority would have been intolerable and we were all thankful to be spared that, but we often felt that the plans and schemes sent down from Olympus for the information of, and necessary action by those Troglodytes of the Trenches among whom we dwelt, savoured more of a callous opportunism and an expectant and unjustified optimism, than of brains, genius, or an acute appreciation of the realities of the actual situation.

Sometimes indeed we felt it was as impossible for the Higher Command to grasp the true state of affairs in the line, as it was for them to estimate with any approach to accuracy the limitations of endurance of that human flesh and blood with whose mortal existence they so unconcernedly gambled.

Not by any means was this due to any lack of gallantry or personal courage on their part, but perhaps it may have been because living as they did, far away from the fighting, in an atmosphere of detachment, wrapt in a mist of maps and reports, they could still think of war in the abstract terms of its old time art, rather than of its grim and sordid reality of death, mutilation, and failure from which all artistic glamour had long since been torn aside, revealing to us only its naked and revolting hideousness.

It is true that our doubts and fears, our resentment of failure, and of the useless sacrifice of life were accustomed to be soothed for us by the ready official assurance that we could not possibly understand them properly. We were reminded of the difficulty of seeing the wood when one was close up amongst the trees, and were constantly told that we were only small and insignificant parts of an enormous plan, pawns being skilfully moved to our appointed places by the master hand of some mighty and omniscient genius. This with the further guarantee that all would yet be well, we were generally bold enough to doubt, but this our fighting comrades rarely did, and therefore went forward time after time in blind and implicit trust to meet their inevitable doom, marching gaily to the sacrifice and being as surely massacred, to prove again that another imperfect and futile plan had as usual miscarried.

Nor does it mend matters now to realise that the actual state of affairs was infinitely worse than our most dire imaginings and that many of those most closely responsible for all the muddle and uncertainty were but blind leaders of the blind, groping in a hopeless darkness bred of ignorance, obstinacy, and indcision, many of them so absorbed in pushing their pet and rival hobbies and schemes in a maze of jealous and unworthy intrigue, that they effectually ruined the chances of any sound plan which the best

of our soldiers might eventually have evolved. Truly with such confusion at the fountain head, calamity in front was unavoidable, and the greatest marvel of all is that we were not defeated long ago. Indeed, had the enemy not been similarly handicapped, or had he been half as brave, determined, and ruthless as we all believed him to be, his "Mittel-Europa" would long ago have been an accomplished fact, and we his helots would now have been building for him Empires hitherto undreamt of.

And if such was the state of things at the Head Quarters of our supreme fighting organisation, it is perhaps not very remarkable that its subsidiary and ancillary branches were in very similar case.

That the Medical Service was in some ways good, and that some of its work was excellent is beyond question, but that it was also in many respects capable of very great improvement, and that at best it was an unequal and irregular patchwork of indifferently controlled and badly co-ordinated effort is also incontrovertibly true; and here as elsewhere the fault lay far more in the personnel than in the equipment. The general system was sensible and well enough designed though many of its details were sadly out of date, and it would be easy and pleasant to record only its

successes or its best achievements, but my present purpose is critical and I shall here endeavour to point out only those defects most obvious to us, and to suggest how some of them might in future be avoided.

And the pivot on which the whole organisation depended was personality, and that, as we are now being told on every hand was lacking. If big men were wanted at the head of affairs, they were also badly needed in the higher ranks of the Medical Service. Men of power were required, men of vision, men of genius, men with knowledge and character, with ready and receptive minds, quick in decision and energetic in execution, with sufficient personality to imbue their subordinates with their own ideas and their high qualities. And such men, so far as our experience went, were apparently very hard to find. Of those we did meet some no doubt had one quality and some may have had another, but many of them were sadly lacking in all, and a few were indeed so far beneath even the ordinary level of educated intelligence, that they succeeded in inspiring nothing but contempt. Yet they had obviously been deemed fit for the posts they held, a fact which made their own default no less, and inferred gross incapacity or culpable carelessness on the part of those who appointed them, and equally of those who allowed them to remain. With two of them whom I have specially

in mind at this moment, decision of any kind seemed to be an impossibility and when one was ultimately and far too late forced upon them by the relentless pressure of circumstances, it was invariably wrong and most probably ludicrous in addition. Criticism of this kind is of course easy to make and valueless unless supported by reliable evidence, but such can easily be produced if required. I have not penned any of it lightly and each statement is based upon matters which came within my own personal experience which was always shared by others, so that competent and trustworthy witnesses are abundantly available.

Again, in our opinion the selection of men to fill the less exalted posts was equally uneven, and instances could be multiplied indefinitely of the confusion and lack of care exercised in making these subordinate appointments.

Like their fighting brethen the Medical Higher Command seemed to worship with wholehearted devotion at the shrine of 'Seniority', that fetich to which most of them owed their own promotion and under whose aegis they had all been trained, until they were unable to steel themselves to break the bonds of this their sacred tradition, no matter how narrow its limitations and paralysing its influence.

And their System too, once established was apparently deemed perfect and incapable alike of either alteration or improvement, for here again, axiom, custom, and tradition were revered and obeyed with scrupulous and almost superstitious fidelity. To take one example; it was one great principle that when once a man had passed under the care of the Medical Service, the continuous chain of Medical supervision of which they were so proud, must never on any account be broken, and this it was which led to the officering of a petrol-consuming mechanical transport unit, the Motor Ambulance Convoy of about fifty cars, by three duly qualified Medical men, the Commanding Officer (sic) and his two assistants. This formation, a sort of Red Cross Pickford's agency, could perfectly well have been conducted by a disabled fighting Officer with some knowledge of motors and one good N.C.O. but no, that would have been too simple. It was engaged in handling wounded men, so it too must be medical, just as if the guard on a fish train must of necessity be a fisherman!

And it was probably an inherited lack of elasticity and of rapid and easy adaptability which sent experienced general practitioners of over fifty years of age to act as mere dressers in the trenches, while allowing ignorant, inexperienced and

but recently qualified youths of twenty-two, to join the Staff as D.A.D.'s of M.S. or to decide difficult medical problems in Clearing Stations or Convalescent Camps at the Base; and similar slackness not infrequently resulted in the wicked mutilation of our wounded in field and stationary hospitals by third rate practitioners masquerading as Surgeon Specialists entirely on their own recommendation.

The catalogue of failure could easily be prolonged, but enough has been recorded in general terms to show that we were keenly alive to many of the defects in our organisation, and while we admit gladly that much was good, we hold that it might all have been very much better, and we still have the feeling that besides all that was known by ourselves and others, many other things were done in the sacred names of Medicine and Surgery that could ill have borne investigation in the light of day.

It is only fair to admit that with regard to equipment and other details requests came down to us more than once for criticisms and suggestions, but even after many of us had responded to those with care and thoroughness the results were disappointing. Little was done to improve matters and the cause of this slackness or indifference could not be found.

The only explanations that occurred to our minds were that those in charge were men of limited ideals who were accustomed to be satisfied with very indifferent results, or that they lacked interest in their work and sympathy with our aims, or were diffident and timorous about pressing their wants and claims on the executive. This belief was also apparently confirmed later on in the Autumn of 1917 when during the next great hunt for fresh "A" Class soldiers to massacre, those responsible for our personnel actually gave way before the pressure of shirking authority and allowed it to be proposed that the Field Ambulances should be ordered to give up their "A" Class stretcher bearers and replace them by men of lower category. Fortunately this unspeakable fatuity was met at once by a protest so instant and vigorous from all the field units, fighting as well as medical, that it was cancelled, but not before the Medical Authorities had succeeded in making themselves a laughing stock for all the forward troops, and convincing most of us that they were hopelessly ignorant of the details of our work. Long before this it had been recognised very generally that efficient stretcher bearing in a battle in France demanded not only personal courage, and self-control of a very high order, but physical strength and endurance of the finest possible quality as well, facts which one would have imagined might

by that time have been appreciated even by those who presumed to control the destinies of the Medical Services in the field.

It may seem ungracious and indeed almost presumptuous thus to criticise the Regular R.A.M.C. Officers, especially as my own personal relations with them were almost uniformly excellent, still such is the obvious conclusion of my argument and I merely mention here some of the faults and failures which forced themselves upon our attention.

Many of these Officers were to us extremely kind and considerate, generous in their appreciation of our work, and anxious to help us in any way they could; but such was not by any means the habitual attitude of some of them, more especially those of senior rank under whom we were compelled to serve. These we encountered chiefly when they were examining our methods and our work, and we could not but feel that on such occasions they were seldom seen to advantage. Their manner was very generally and very openly hostile. They were apparently out to find fault, and if that were difficult they were apt to become peevish and petulant while their comments were not infrequently both fatuous and puerile.

Little allowance was made for the natural and obvious difficulties of any trying situation, and far too much stress was laid on the value of formality and external show when both had been purposely subordinated to the more pressing and more vital necessities of the moment. Often have I seen a Medical General scoff at the absence of white-washed entrances and well trimmed paths, while ignoring the fact that the hurriedly pitched tents were already full of comfortable well-fed wounded men, whose every injury had been carefully and thoroughly dressed so that they were even then well on the way towards that recovery which was our immediate and their own ultimate aim. Similarly I have seen a temporary wayside dressing station filled with skilfully tended wounded men, condemned out of hand, because perhaps some wearied ex-bricklayer in momentary charge of the so-called "pack-store" had not found time to oil the rifles!

And incidents of this kind were a constant annoyance to us, for wounds and sickness appeared to interest these Officers not at all, though to be able to comment in a military fashion with some pretended knowledge of a rifle or revolver or some other such appliance entirely beyond their province and savouring of professional soldiering seemed to them as the very breath of life. In fact so well recognised was this,

that those who sought to gain their approbation had only to concentrate whole-heartedly on whatever vain and useless externals were most in fashion at the moment, and allow wounds and illness and their care and treatment to become their last and most perfunctory consideration.

Of course, it may be urged that all this is after all rather elementary, and that it is well known that any experienced Inspecting Officer can quickly estimate the character and value of any system, or place, or of any group of men from certain indefinite but easily noted features and characteristics both of men and methods; and so it may in some cases have been. But though we began our career by believing this implicitly, we very soon came to the conclusion that it was very seldom true, and a succession of egregious mistakes and much depressing disillusion forced us to the realisation that carelessness was more frequent than capacity, and ordinary stupidity more common than both. It is therefore scarcely a matter for surprise however regretful, that we came in time to regard both the men and their methods with an indifference sometimes almost amounting to contempt.

Nor was this attitude towards the sick and wounded confined exclusively to the higher ranks,

for even among their juniors there was not wanting a certain arrogance in the way in which suffering humanity in uniform was handled and regarded. Many of the younger Officers seemed but indifferently educated, and as has been already indicated much of their medical work was lamentably superficial and careless; and indeed it could scarcely be otherwise, for the punctilious filling up of valueless printed forms, useful no doubt in peace but superfluous in war, became with many of them an absolute obsession to the complete extinction of any other kind of professional activity. And when one remembers that these documents were largely covered with hieroglyphics like N.Y.D., (meaning Not Yet Diagnosed) which came in time to be commonly accepted, not to denote the necessity for the further observation of a sick man, but as a positive " diagnosis " sufficient to determine the indefinite if not the final disposal of any patient so designated, the cause of much slackness and negligence is not very far to seek.

And so it was with other officially countenanced tags made up of similarly valueless initials; D.A.H. signifying Defective Action of the Heart, whatever that might mean! V.D.H. - Valvular Disease of the Heart, details again unspecified; P.U.O. - Pyrexia of unknown Origin, scarcely a distinctive feature in

the Army; and I.C.T. for Inflammation of Connective Tissue meaning Cellulitis. The common use of all these subterfuges, for they were nothing else, branded all the work which accepted them as inept and amateurish in the last degree, for surely little medical training was needed to enable any man to venture thus far into the intricacies of medical diagnosis, and it is well known that a large percentage of the cases in certain Divisions were never more completely differentiated until they had reached their final resting place.

Truly this Army Medical attitude of mind contrasted most unfavourably with that of many of the Staff Officers of the Executive and Fighting branches of the Service. When our own Divisional Commander entered any of our dressing stations no matter how flimsy or temporary they were, he invariably came as our most heartily welcomed guest. All his thoughts were for his sick and wounded men and his sole desire was to assure himself that they were comfortable, happy and well looked after. His criticism was always kindly and very much to the point, and all his efforts were directed to help us to make our work more efficient and our professional service more complete and thorough.

The waste of doctors has already been referred to in the text, and it was generally due to the unnecessary insistence on superfluous detail in their

distribution, and though it caused a good deal of irritation and difficulty and provided far too many 'soft jobs' for those who sought them, it was not such a grievous fault as the extraordinary carelessness which was exhibited in the selection of men for the various posts they were given and allowed to retain. And here I do not refer to the so-called R.A.M.C. specialists who were apparently accustomed to be recognised as such after a three months' course in their chosen specialty, but to the ordinary Officers both senior and junior who were drafted indiscriminately from training to a job, and then from one position to another with but slight investigation as to their fitness for any of them.

With regard to the transferring or promotion of the junior Officers in field units, little endeavour was ever made to secure any expression of opinion as to their capacity or attainments from their Commanding Officer, and as a result of this systematic lack of care, it would be easy to multiply examples where the round peg of brains and keenness was left indefinitely to rot in the square hole of idleness and futility.

Nor were the senior promotions much better. It has already been mentioned how largely these were determined by seniority of service, and though we considered this method entirely effete and altogether

unsatisfactory, it was after all understandable; but what we never could comprehend was the obvious reluctance of the controlling powers to get rid of such of these senior men as were quickly proved to be quite unfitted for the posts which they had been given. It was undoubtedly to this that many of the failures in the later stages of the war were directly to be attributed. And these failures were not confined to the Regular Service, though the responsibility for them most certainly was, for during my own career in France while I met six Territorial Officers who had been promoted to the rank of Divisional A.D.M.S. only two of them were accounted as in any way successful occupants of that important and responsible office. Of the other four, three were colourless and ordinary individuals with little initiative or originality and the fourth was a dentist who knew nothing of either medicine or surgery, though he did on one occasion give a lecture to about thirty medical men, on the differential diagnosis and treatment of "pukkha" Diarrhoea as contrasted with "mere looseness of the bowels". It is perhaps scarcely necessary to add that the two who completely justified their selection and were thoroughly successful in their work were both well tried general practitioners of forceful and

distinctive personality.

We found it difficult, too, to understand or be satisfied with the selection of junior Officers for the several positions which they had to fill, for it seemed to us something of an anomaly that the average age of those in a Field Ambulance should be nearly forty, while that of most of the Officers employed in a Casualty Clearing Station ten miles further from the fighting should be very much less.

Perhaps this may have been partly because we were constantly required to fill up countless forms of all sorts and sizes, telling Authority what was our particular bent, and what we could do best, which were no doubt carefully filed as reliable statements of fact, although not infrequently a man's own estimate of his usefulness and that of his immediate associates would have been found strangely at variance.

And as with the human factor, so with the material with which we had to work. It required but a few months' active work in the field to convince those of us who lived near the line in the mud and the dirt that most of the rubbish which Regulation compelled us to cart about was not only useless, but a mere encumbrance but, in spite of repeated recommendations and complaints, except for a few minor and unimportant modifications, this, our established mobilisation equipment, was with us to the end. And after all

was over when by endless effort and every conceivable subterfuge we had succeeded in making it once more and finally complete to the last safety-pin and tin-pot lid, we had the melancholy satisfaction of seeing it all handed over to negligent authority and left to rot on the quay side at Richborough.

The bell-tents and operating-tents of pre-South African War days were ours to the end, and it is now as impossible as it would be useless to enumerate all the detailed alterations which might have proved so helpful in lightening the burden of our work and thus have allowed us to be of so much greater service to those of our stricken comrades who perforce fell into our hands.

Month by month as the war developed, our executive altered the detailed constitution of our fighting organisation until its pre-war character was scarcely recognisable, but through all this the Medical establishments remained practically the same, though most of their limitations and inadequacies were painfully evident to those who had the eyes to see. To take the very simplest illustrations: before the war few of our fighting generals had ever seen a whole military Division, far less had the chance of handling one as a definite entity; yet quite early in the war,

these formations became a commonplace, and the Divisional Head Quarters Staff a most important and ever growing body of Officers and men, while the Brigade Head Quarters Staff was not much smaller. Yet because before the war this hypothetical body which had practically never actually existed except on paper was not allowed to have a water-cart, so it had to continue to exist throughout the whole campaign as best it might without the help of this most invaluable adjunct. Again, though a field cooker was deemed a necessity for every Infantry company numbering about two hundred and forty men who had rarely any duties to perform when on the march, such an appliance was repeatedly refused to all the Field Ambulances whose personnel was larger, and who were almost as much at work when wearied troops were changing ground as they were when in position in the line.

To repair our guns, our cars, our aeroplanes and our tanks, mobile workshop lorries filled with most perfectly arranged fittings and endless mechanical labour saving devices were supplied in lavish and seemingly endless profusion, but for the repair of the incomparably more precious and finally much more irreplaceable human soldier scarcely anything was ever produced that could not be fairly described as almost prehistoric. It is true that mobile "X" ray

caravans and mobile laboratories eventually appeared, but for all the benefit they were to the actual field units they might just as well have been left at home, though ~~why~~ the Field Ambulances were never supplied with mobile workshops which many of us would gladly have designed, ~~for the repair of the wounded soldiers~~ remains still an inexplicable mystery. How simple it would have been to build such a vehicle fitted as a sterilising room with extensible operating tents attached to its sides, which could have gone almost anywhere as indeed the ordinary lorries did, and could have been ready for finished work in less than half an hour, thus doing away with the constant and almost continuous partial and imperfect dressing which was the lot of so many wounded men whose thorough treatment was often far too long delayed. And equally easy would have been the design and supply of mobile bath-houses, mobile cook-houses, and wash-houses and tent and equipment stores, which would have been sufficient to provide the forward medical units with practically all they ever had to use and all they ever wished to have.

When I look back and think of our endless labour at imperfect and makeshift improvisation, some of which I have attempted to recount in these dull and tedious pages, and recall how we collected and

utilised other people's discarded rubbish to build accommodation for our sick and for our wounded, knowing well that their only hope was either that or nothing, is it remarkable that one's soul is full of bitterness and resentment at the wicked and culpable lack of interest and foresight which allowed such things to be, and went on year after year deaf to our appeals and blind to our necessities, content to leave the sick and wounded in the forward areas to be the sport of hazard and individual caprice, suffering often the double tortures physical neglect and mental despite, while our mechanical weapons were cared for with tireless zeal and almost religious devotion.

Regrets may now indeed be vain and wisdom after the event may be easy, but it will remain to me a life long haunting memory how little of what we might have done we actually did, and how little deserved were all the paeans of praise and congratulation which were showered upon the Medical organisations, the fruit no doubt of that limitless generosity and goodwill which would willingly and cheerfully have satisfied all our desires for improvement, had they not been regularly and consistently doped with the ever ready assurance that all was well, as perhaps indeed it seemed to those whose habitual attitude of mind appeared to be one of callous indifference or abysmal ignorance or both.